

QUERY	1	10	20	30	40
UniRef90_UPI000475C374	G E V V R I D R A F G N V W T N I P T H L I G R L E V K I L S D T V L E L P P F C				
UniRef90_M5PDL1	G I P V L D V Q Y G N V W T N I P Q K L F D E L G I K V G E S V R V R V P Y R				
UniRef90_I0JHH1	G T I D I L D V R F G N L W T N I S R R L F S K L L D I R Y G D A Y C Q T I V F G				
UniRef90_K2FJ56	G T V D I L D I Q F G N L W T N I P R E A F H Q L G I T H G D H F H Q L M T F G				
UniRef90_N4WL07	G M I D I H D V R F G N L W T N I S R E L F D Q V Q V T I Q H G D R N I I T F A				
UniRef90_A0A024PLM0	G M I D I L D I R F G N L W T N I P R D F F K E M G V R Y G D T Y N N S M T F G				
UniRef90_K9TGL5	G C Q Y I D R F G N L I T N I P G T S V R G K P G S V I E V G D R M I P G G				
UniRef90_B7K3L6	G S Q Y I D Y F G N L I T N I S G N L L K Q K D W T V M V N H Q T I K K G				
UniRef90_B4SEE3	G T I I C T D H F G N L I T S L D A E V L D R S K E W L I G A G N H Q L P I C				
UniRef90_UPI00047150AF	G N I D I L D V R F G N L W T N I D E D L F K Q L E V T Y G D V Y K H V M T F G				
UniRef90_I4HW77	G Q Q Y I D I V F G N L I T S N I P D Y L L E G K N W S V Q L G P K I I P A K				
UniRef90_K9T510	G T Q Y I D V F G N L I T N I P A T A V E D K R W S I A I A D S I V P P C G				
UniRef90_F4HN06	V I Y I D D F G N V I L N L E D Y G R P K A V E L I D F N L R I P Y L				
UniRef90_B6YX40	V I Y I D D F G N V I L N L E D Y G R P K A V E L I D F G L T I P Y L				
UniRef90_A8FJA7	G T I D I L D V R F G N L W T N I H H T L F E Q L S I N Y G D A Y K N I M T Y G				
UniRef90_U1NUD5	G E V L V V D D F G N A I T N I P G E W L D D F E A A V I D G D R V P V V				
UniRef90_U5LE21	G C E I M D V R F G N L W T N I G R T L L I E M G V A H G D R L I A E I R F G				
UniRef90_F8EE77	G N I P L L D V Q Y G N I W T N I P V D L F K K L N I T A G Q N V K V T M P F A				
UniRef90_UPI0003084D4D	G A V Q Y I D R F G N A A T T P A S A E C A R W T L T V G K T T M P G G				
UniRef90_A3IPF2	G S I Q Y I D H F G N L I T N I L P H H V K N K N W S I V N N Q K I Q S G G				
UniRef90_B7KKT6	G C Q Y V D H F G N L I T N I P P Q E I A G K N W S I V V K D I K I P S G G				
UniRef90_D0MM7	G W V V H V D R F G N C I T N V S R E L F E R Y R F K C Y V G S T P F T Q V Q				
UniRef90_R5APP1	G C V D I L D V R F G S L W T N I P R E T F E Q I G V G F G D E V K N R I T Y G				
UniRef90_N2B217	G T D V L L D V R F G S L W T N I P V E L F K K L G S F G E R V R N T M V Y G				
UniRef90_V7Q541	G T D I L D I R F G N L W T N I S R K L F K S L D V Q Y G D P V Q Q T M A F G				
UniRef90_I6UZU3	V I Y V D D F G N V I L N L E G Y E K P K E V V L P D F K L T L P Y L				
UniRef90_F4Y1K7	G S Q Y V D H F G N L I T N I P G A E V D G K I W S V K S D R I I P H T				
UniRef90_Q0YU10	G S I Y T D H F G N L V T S I D A Q L L D R S K K W H V H A G K Y R H P V S				
UniRef90_A0A024PPN0	G T D I L D V R F G N L W T N I H K E L L D Q L E V T I T H N G N Q V M S F G				
UniRef90_F4LP10	G T D V L L D V R F G S L W T N I P R A L F L K L G V A H G Q R Y K N I V V Y A				
UniRef90_F7Z286	G T D T L D V R F G N L W T N I D S S L F R Q L D V N Y G D H Y K N I M T F G G				
UniRef90_L5N765	G S D V L L D I R F G N L W T N I S R E L F D G L E V T I D N G T R Q T M I F G				
UniRef90_K9XRY9	G C Q Y I D H F G N L I T N I P P E E M V N P S W L V K V K D T I I A I A				
UniRef90_U2CTL0	G T D V L L D V R F G S L W T N I P R E L F L K M G V S Y G E R I E V I I E Y A				
UniRef90_W9AIR4	G N D I L D I V R F G N L W T N I P R S L I E Q L G I N Y G D K Y N N I M L F G				
UniRef90_UPI0003FC6ADD	G A D I L D I V R F G N L W T N I H R S L I E Q L G I N Y G D K Y N N I M L F G				
UniRef90_K9XID2	G C Q Y I D G F G N L V T N I S G D Y V S G K R W V V V A R G R E I P P C				
UniRef90_H0UNK8	G N I P L L D V Q Y G N V W T N I G E D V F G A L K P V K G K M Y Y V R I P F A				
UniRef90_UPI0002DA7454	G T D V L L D V R F G S L W T N I S R E L F N E L D V T F G D K Y R N K I V Y G				
UniRef90_U1PPH9	G E V L A V D D F G N A I T N V P G S V V D R L G E R L R V E G P T Q A P A V				
UniRef90_UPI0003A7A7AC	G T I D I L D V R F G N L W T N I S R E L F L Q L N I D Y G E A V E I E I T F G				
UniRef90_K1Z1T6	G E V H V D N F G N L C I T N I S R Q E V E N F E I V I R V K E N I L I P L C				
UniRef90_L8MA16	G C Q Y C D R F G N L V T N I P A D L L G G Q N W Q I E I S G Q N I P V V				
UniRef90_D8GCX9	G T D I L D I R F G S L W T N I P L A T F K K L G V A G E R Y Q N Q M P F T				
UniRef90_K9YYN2	G Y V Q Y I D Y F G N L I T N I P A T E V R R K Q W F A I I K D Q V I S S G				
UniRef90_D0Z9A5	G T A I L D V Q Y G N L W S N I G D E M L E K A G I A L N D R L C I T I P Y V				
UniRef90_W1SLK8	G N I D I L D I R F G N L W T N I D R V L F K D L E V T I E N D T R Q I M T Y G				
UniRef90_Q041L8	G S I D V L L D I R F G S L W T N I P Y D L V K K 1 A D I K R G D K Y H D T I P F V				
UniRef90_C4L1J4	G L V E I L D I R F G N V W T N I P V Q L V R Q A G V D I G H R V I I T I S F G				
UniRef90_E7NRC4	G T D V L L D V R F G S L W S N I P Y T L F K K L A V S I R N D R R Q T M V Y A				
UniRef90_UPI00036766A4	G S I Q Y I D H F G N L V T N I P G S D V L G R N W N I E V A G I T I P N C				
UniRef90_K8GN03	G C Q A V D H F G N L I T N V H E K D V A N S T W A V W I T D L W I H P V V				
UniRef90_B1WU15	G F Q Y I D H F G N L I T N V S S R Q L K A K K W F I I D N Q V I Q S G				
UniRef90_D1B8Y8	G S I D V L L D I R F G S L W T N I P Y D L V K K 1 A D I K R G D K Y H D T I P F V				
UniRef90_UPI00035CB818	G N D V L L D V R F G N L W T N I D R S L L F Q L G A Q Y G D V Y K N I M T F G				
UniRef90_F0LGZ8	V I Y I D D F G N V I L N L E D Y E R P K Y V E V E G L K I P Y L				
UniRef90_K9TVE5	G C I Q Y I D R F G N L V T N I P G S D V E N R S W T V R L G E R I V P G C				
UniRef90_K9VYC3	G Y V Q Y V D Y F G N L I T N I P G A D V V Q G K A W S V V S D V S I P P G C				
UniRef90_G0HNR8	T V L Y I D D F G N V I L N I F E N Y G A L R A V E L P D L G V R V P Y L				
UniRef90_UPI00036576F6	G W V V H D R F G N L I T N I I S E D M I G R R K V K I Y V G N T M I D H L V				
UniRef90_W0JNN3	G E V L V V D D F G N V I T N V P G T F L L A D R E S V V A N G S R V P V G				
UniRef90_UPI00036A242A	G W V L H I D R F G N L V T N L T K D L L K K K S V K I Y V G N T M L N K I V				
UniRef90_S2VXF7	G T D T H D V R Y G S S L W T N I P R E L F L D L G A K M G E Y V R V H I K Y V				
UniRef90_S3K3S2	G S D V L L D V R F G S S L W T N I S R R L F N S L G I A Y G G K V E V I I R Y A				
UniRef90_E0D4X4	G S D V L L D I R F G S S L W T N I P L D Y L K E A N Y S H G D Q I L M N I K F V				
UniRef90_UPI000474AB4A	G S I Q Y I D H F G N L V T N I P G N Y V Q G R T W Y V K A A G L T I T G C				
UniRef90_UPI0003644B74	G R I I Y I D D F G N L I T N I S K E D F S Q L K V K I I N N V E Y E L P F V				
UniRef90_A0A024QE08	G H D I L D V R F G N L W T N I D R E S F E A L N V R I T T N S H N S M T F G				
UniRef90_Q4C6F7	G S I Q Y I D H F G N L I T N I S S L L V R D K N W S I K V D D K V I K S G				
UniRef90_UPI000301769A	G S I Q Y I D T F G N L V T N I P A S Y V Q G K T W S V Q V G E K I I N G C				
UniRef90_TOZUX2	G V V I A L D H F G N L I T N I D G A L L E R F R R L P L V R T G H H A F P L L				
UniRef90_UPI00036E39C2	G E V A F F D R F G N V E T N I P G T F L E G L R V T I K R D G G E F V T Y C				
UniRef90_UPI00047972EF	G C I Q Y I D H F G N L V S N I P G S Y V Q G K S W G V V L L G E K T I T G S				
UniRef90_B2J119	G C I Q Y I D H F G N L V S N I P A S Y V Q G K T W Y V Q A A G L N I P P G C				
UniRef90_L0AFT3	G E I L V V D D F G N A I T N V P G S F L E D R E R I T L D G E T V P V G				
UniRef90_UPI0003829E09	G T D I L D I R F G N L W T N I H K R Y F D T L E V T I L D D T R Q V M S Y G				
UniRef90_K1WJL1	G S I Q Y I D H F G N L I T T I P G D M V A D K S W N V S F P E C P K I S S H				
UniRef90_UPI00036F9CA5	G H I Q Y I D H F G N L I T T I P G D M V A D K S W N V S F P E C P K I S S H				
UniRef90_F7YVA7	G E V V F F D G F G N V E T N I P G E F V E R L R G W E I D D N G K Y K A T Y A				
UniRef90_D2R2V2	G E V L V V D D R F G N L L M T N I T R D L L S Q F G A E V I L G A T S I G A I G				
UniRef90_UPI00028A410F	G M I D V L D V R F G N L W T N I D H N L F D R L E V T I R N D T R N T V V F A				
UniRef90_UPI000345B5F5	G C V Q Y I D R F G N L I T N I P G S C V A G R S S W E A I A G N L T I K S G				
UniRef90_K9RP16	G T I Q G I D H F G N V I S T I P K T L C Q G G T W M V Q Y Q A L T L P L M				
UniRef90_A3DNT1	G S V I Y I D V F G N I M T N I S M D D I N K I K L S Y G E K L Y I K P F V				
UniRef90_U9VWB8	G S I Q Y I D H F G N L I T T I P G E I L A K Q P W N V R V G C D L A P S Y				
UniRef90_A7NJ08	G R I I H D H F G N C I T N I T L K H L K E A G I G I G E R M A G Q R I E G L Y				
UniRef90_F8EY39	G T D A L D V R F G S L W S N I P Y K L F E D L E V S I R N D T R N T M V Y A				
UniRef90_K9SH80	G C Q Y I D H F G N L I T N I P A K L I D G Q D W A V I L G G Q E I K G G				
UniRef90_F2L404	G Q I T Y I D R F G N V F T S I D E K L V D R L C V K I S G R V Y E M R F L				
UniRef90_V9ZW07	G T I P L L D V Q Y G N V W T N I D D T L L T R A G I N K G D N A C I R I P Y V				
UniRef90_G6FUY9	G C Q Y I D H F G N L V S N I P G T Y V Q D K S W S V L V G D K I I P G S				

QUERY UniRef90\_UPI000475C374  
UniRef90\_M5PDL1  
UniRef90\_I0JHH1  
UniRef90\_K2FJ56  
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UniRef90\_R5APP1  
UniRef90\_N2B217  
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UniRef90\_Q0YU10  
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UniRef90\_F4LPI0  
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UniRef90\_H0UNK8  
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UniRef90\_U1PPH9  
UniRef90\_UPI0003A7A7AC  
UniRef90\_K1Z1T6  
UniRef90\_L8MA16  
UniRef90\_D8GCX9  
UniRef90\_K9YYN2  
UniRef90\_D0Z9A5  
UniRef90\_W1SLK8  
UniRef90\_Q041L8  
UniRef90\_C4L1J4  
UniRef90\_E7NRC4  
UniRef90\_UPI00036766A4  
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UniRef90\_Q4C6F7  
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UniRef90\_B2J119  
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UniRef90\_K9RP16  
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UniRef90\_U9VWB8  
UniRef90\_A7NJ08  
UniRef90\_F8EY39  
UniRef90\_K9SH80  
UniRef90\_F2L404  
UniRef90\_V9ZW07  
UniRef90\_G6FUY9

	50	60	70	80	
K T F G E V D E G Q P   L L Y L N S R G R   L A L G   L N Q S N F   I E K W P   V V P   G D	H T F G E V P V G K P   L A Y I N S L L M N F   A L A I N Q G N F   A K E H H   I G S G T	R S F A D I P V G E P   L V Y V N S L L D N   L G V A I N Q G S F   A E V Y D   I G T G I	R S F A D T H K G E P   L V Y I N S L L D R L   A V A I N Q G S F   A K A Y D   I G T G S	R S F A A I P V G E P   V V Y I N S L L G Y   L A I A M N   Q G S F   A K T Y Q   I G S G E S	R S F A D T H K G E P   L V Y V N S L L D N   L G V A I I A I N Q G S F   A R A Y N   I R T G S
N T Y S D A P R G G A V   A L V G S H   G W V E   I A I N G G N A   A D T L   Q L A V   G A	L T Y S D V E L G E L   I T L I G S H   G W V E   I A I V N G G N A   Q K K   L Q V D   W G E	R T Y G E V A D Q Q P   L A Y T G S S   S G M I   E I A I R N G N A   A E R L   L G R D   G D	R S F A D T H V G E P   P L Y I N S L   Y T I G V A I I N Q G S F   A K A Y H   I G A G A	N T Y S D V P S G E I   V A F I G S H   G G L   E I A V N G G S A   K K Q   L H N   G D	R T Y S D V K V G E I   I T L V G S H   G W V E   I A V N G G S A   K S Q   L Q V D   W G D
S T Y G E A E E G K   L L A L P   G S H   H D Y   L E I A V N R G S A   A E R L   L N   K V G D	E T Y G L V K P G E   L L A L P   G S H   H D Y   L E I A V N Q G S G A   E R L   L G   K V G D	R S F A D L K V G E P   L V Y V N S L   D H   G V A I I N Q G S F   A K A Y N   I G T G T	R S F A D L K V G E P   L V Y V N S L   D H   G V A I I N Q G S F   A K A Y H   I G T G T	D T F A S V D P G E R   L L T T G S H   G Y V E   C D V N Q G R G   D D A F   G L S A G A	K S F A D V P G G E P   P V A Y I N S L   G N   L G L A V N Q G S F   A E I F   S I G A G Q
N T F G E V P E G Q P   M S Y L N S L   M N   L S F   A I N M G D F   S S K Y   G V K S G P	N T F G E V P E G Q P   M S Y L N S L   M N   L S F   A I N M G D F   S S K Y   G V K S G P	K T Y G A V S P G D G   L A L A G S   H G F   I E V   A I N Q G S A   Q Q R F   G L A V   G D	K T Y G A V S P G D G   L A L A G S   H G F   I E V   A I N Q G S A   Q Q R F   G L A V   G D	P T Y G A V A Q G E A   L L F G S S   S D F   L E I A I V N G G S A   Q S K   L S N   G D	P T Y G A V A Q G E A   L L F G S S   S D F   L E I A I V N G G S A   Q S K   L S N   G D
H S F A D H V I G E A   L V Y V N S L   Y R M   A V A I I N Q G S F   A R A Y S   V G T G M	H S F A D H V I G E A   L V Y V N S L   Y R M   A V A I I N Q G S F   A R A Y S   V G T G M	R S F A D V Y V G E P   L V Y M N S   L N   C   M A V A I I N Q G S F   A R A Y N   I G T G N	H S F A D V Y V G E P   L V Y M N S   L N   C   M A V A I I N Q G S F   A R A Y N   I G T G N	R S F A D M P V G K P   V V Y I N S L   D R L   G I A L N Q G S F   A K T H H   I G T G I	R S F A D M P V G K P   V V Y I N S L   D R L   G I A L N Q G S F   A K T H H   I G T G I
D T Y G Q V K P G E   M L A L P   G S H   H G Y   L E I A V N Q G S A   A D V   L K   V G D	D T Y G Q V K P G E   M L A L P   G S H   H G Y   L E I A V N Q G S A   A D V   L K   V G D	Q T Y S N S C Q   L G E Y   V A L   I G S H   G W V E   I A V N Q G S A   K S Q   L Q D W G D	Q T Y S N S C Q   L G E Y   V A L   I G S H   G W V E   I A V N Q G S A   K S Q   L Q D W G D	R T Y G D A A D Q Q P   L A Y T G S F   G M I   E I A V R N G N A   R E T   L G   K D G D	R T Y G D A A D Q Q P   L A Y T G S F   G M I   E I A V R N G N A   R E T   L G   K D G D
R S F A D S R   L G E P   L V Y V N S   V D N   L A I A L N Q G S F   A Q A Y N   I R T G S	R S F A D S R   L G E P   L V Y V N S   V D N   L A I A L N Q G S F   A Q A Y N   I R T G S	K S F A D V Y V G E P   L V Y M N S   L N   C   M A V A I I N Q G S F   A R A Y N   I G T G N	K S F A D V Y V G E P   L V Y M N S   L N   C   M A V A I I N Q G S F   A R A Y N   I G T G N	R S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A K A Y H   I G T G I	R S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A K A Y H   I G T G I
K S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A K A Y H   I G T G I	K S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A K A Y H   I G T G I	R S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A R A Y N   I G T G L	R S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A R A Y N   I G T G L	K S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A R A Y N   I G T G L	K S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A R A Y N   I G T G L
K S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A R A Y N   I G T G L	K S F A D V Y V G E P   L V Y V N S L   D N   M A V A I I N Q G S F   A R A Y N   I G T G L	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	N T F G D V P E G K P   L Y Y N S   L M N   L S L A L N M D S F   A E K F   G   S S G P	N T F G D V P E G K P   L Y Y N S   L M N   L S L A L N M D S F   A E K F   G   S S G P
E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	R S F A D S R   L G E P   L I Y V N S   L D K   L G V A I I N Q G S F   A R A Y N   I G T G L	R S F A D S R   L G E P   L I Y V N S   L D K   L G V A I I N Q G S F   A R A Y N   I G T G L	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D
E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	R S F A D V H V G E P   P V Y V N S   L D N   M A V A I I N Q G S F   A R A Y N   I G T G L	R S F A D V H V G E P   P V Y V N S   L D N   M A V A I I N Q G S F   A R A Y N   I G T G L	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D
E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	R S F A D V E P E G   P V T V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	R S F A D V E P E G   P V T V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D
E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	R S F A A I I Q   G E P   P V L Y V N S   L D N   L A V A I I N Q G S F   A K A H N   I G T G S	R S F A A I I Q   G E P   P V L Y V N S   L D N   L A V A I I N Q G S F   A K A H N   I G T G S	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D
E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	R A Y G N Q A K G R   L L A L F   D S H   H D Y   L E I A V N Q G N A   A R E   L   G   A V   G A	R A Y G N Q A K G R   L L A L F   D S H   H D Y   L E I A V N Q G N A   A R E   L   G   A V   G A	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D
R A Y G N Q A K G R   L L A L F   D S H   H D Y   L E I A V N Q G N A   A R E   L   G   A V   G A	R A Y G N Q A K G R   L L A L F   D S H   H D Y   L E I A V N Q G N A   A R E   L   G   A V   G A	K T Y S D V A I A K P   P A L V G S   H G Y   L E I A V N Q G N A   Q D L   Q   L   K   V   G   E	K T Y S D V A I A K P   P A L V G S   H G Y   L E I A V N Q G N A   Q D L   Q   L   K   V   G   E	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D	E T Y S D Q P   G N P   I A L V G S   H G W V E   I A V N C   G N A R S   Q   L Q E   Y   L D
K T Y S D V A I A K P   P A L V G S   H G Y   L E I A V N Q G N A   Q D L   Q   L   K   V   G   E	K T Y S D V A I A K P   P A L V G S   H G Y   L E I A V N Q G N A   Q D L   Q   L   K   V   G   E	T S F A D V A I I K D   P L M Y   I N S L   V N   L G V A I I N Q Q D S F   S K   L   Y   H   G T   G V	T S F A D V A I I K D   P L M Y   I N S L   V N   L G V A I I N Q Q D S F   S K   L   Y   H   G T   G V	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D
T S F A D V A I I K D   P L M Y   I N S L   V N   L G V A I I N Q Q D S F   S K   L   Y   H   G T   G V	T S F A D V A I I K D   P L M Y   I N S L   V N   L G V A I I N Q Q D S F   S K   L   Y   H   G T   G V	K T Y S S C P P Q N   L V A L I G S H   G W V E   I A I I N Q Q G N V   A K T   L   G   T   Y   G D	K T Y S S C P P Q N   L V A L I G S H   G W V E   I A I I N Q Q G N V   A K T   L   G   T   Y   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D
K T Y S S C P P Q N   L V A L I G S H   G W V E   I A I I N Q Q G N V   A K T   L   G   T   Y   G D	K T Y S S C P P Q N   L V A L I G S H   G W V E   I A I I N Q Q G N V   A K T   L   G   T   Y   G D	H S F A D V P P G Q   P L V Y L N S   L L N   V A I I N M D S F   F A E K   Q   R   A A G   A	H S F A D V P P G Q   P L V Y L N S   L L N   V A I I N M D S F   F A E K   Q   R   A A G   A	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D
H S F A D V P P G Q   P L V Y L N S   L L N   V A I I N M D S F   F A E K   Q   R   A A G   A	H S F A D V P P G Q   P L V Y L N S   L L N   V A I I N M D S F   F A E K   Q   R   A A G   A	R T F A D I H L G E P   P L Y V N S   L D K   L G V A I I N Q Q G S F   A K A Y H   I E T   G A	R T F A D I H L G E P   P L Y V N S   L D K   L G V A I I N Q Q G S F   A K A Y H   I E T   G A	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D
R T F A D I H L G E P   P L Y V N S   L D K   L G V A I I N Q Q G S F   A K A Y H   I E T   G A	R T F A D I H L G E P   P L Y V N S   L D K   L G V A I I N Q Q G S F   A K A Y H   I E T   G A	T S F A D V A I I K D   P L M Y   I N S L   V N   L G V A I I N Q Q A S F   D T   Y   K   G T   G N	T S F A D V A I I K D   P L M Y   I N S L   V N   L G V A I I N Q Q A S F   D T   Y   K   G T   G N	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D
T S F A D V A I I K D   P L M Y   I N S L   V N   L G V A I I N Q Q A S F   D T   Y   K   G T   G N	T S F A D V A I I K D   P L M Y   I N S L   V N   L G V A I I N Q Q A S F   D T   Y   K   G T   G N	R S F A D V S M G E   P L V Y I N S L   V N   L G V A I I N Q Q G S F   A Q A Y N   I G C   G Q	R S F A D V S M G E   P L V Y I N S L   V N   L G V A I I N Q Q G S F   A Q A Y N   I G C   G Q	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D
R S F A D V S M G E   P L V Y I N S L   V N   L G V A I I N Q Q G S F   A Q A Y N   I G C   G Q	R S F A D V S M G E   P L V Y I N S L   V N   L G V A I I N Q Q G S F   A Q A Y N   I G C   G Q	S T Y N E V N V G E A   A L V G S H   G W V E   I A I I V N N G N A   R S   Q   L   Q   E   L   G   V	S T Y N E V N V G E A   A L V G S H   G W V E   I A I I V N N G N A   R S   Q   L   Q   E   L   G   V	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D
S T Y N E V N V G E A   A L V G S H   G W V E   I A I I V N N G N A   R S   Q   L   Q   E   L   G   V	S T Y N E V N V G E A   A L V G S H   G W V E   I A I I V N N G N A   R S   Q   L   Q   E   L   G   V	T Y S N R P P G S P   P A L I G S H   G W V E   I E I A I I V N Q G N A   Q R   I   L   N   V   G D	T Y S N R P P G S P   P A L I G S H   G W V E   I E I A I I V N Q G N A   Q R   I   L   N   V   G D	P T Y S N S C Q   L G E Y   V A L   I G S H   G W V E   I E I A I I V N Q G N A   Q S   K   L   Q   V   K   G   E	P T Y S N S C Q   L G E Y   V A L   I G S H   G W V E   I E I A I I V N Q G N A   Q S   K   L   Q   V   K   G   E
T Y S N R P P G S P   P A L I G S H   G W V E   I E I A I I V N Q G N A   Q R   I   L   N   V   G D	T Y S N R P P G S P   P A L I G S H   G W V E   I E I A I I V N Q G N A   Q R   I   L   N   V   G D	D T F G D V P E G K P   L Y Y N S   L M N   L S L A L N M D S F   A D K   H   K   V   G   E	D T F G D V P E G K P   L Y Y N S   L M N   L S L A L N M D S F   A D K   H   K   V   G   E	N T F G D V P E G K P   L Y Y N S   L M N   L S L A L N M D S F   A E K F   D   G   V   K   V   G   D	N T F G D V P E G K P   L Y Y N S   L M N   L S L A L N M D S F   A E K F   D   G   V   K   V   G   D
D T F G D V P E G K P   L Y Y N S   L M N   L S L A L N M D S F   A D K   H   K   V   G   E	D T F G D V P E G K P   L Y Y N S   L M N   L S L A L N M D S F   A D K   H   K   V   G   E	D T Y G Q V K P G E   P L Y V N S   L D K   L G V A I I I N Q Q G S A   A E R L   L   S   V   D   K   G   A	D T Y G Q V K P G E   P L Y V N S   L D K   L G V A I I I N Q Q G S A   A E R L   L   S   V   D   K   G   A	D T Y G Q V K P G E   P L Y V N S   L D K   L G V A I I I N Q Q G S A   A E R L   L   S   V   D   K   G   A	D T Y G Q V K P G E   P L Y V N S   L D K   L G V A I I I N Q Q G S A   A E R L   L   S   V   D   K   G   A
D T Y G Q V K P G E   P L Y V N S   L D K   L G V A I I I N Q Q G S A   A E R L   L   S   V   D   K   G   A	D T Y G Q V K P G E   P L Y V N S   L D K   L G V A I I I N Q Q G S A   A E R L   L   S   V   D   K   G   A	Q T Y S N S C Q   L G E Y   V A L   I G S H   G W V E   I E I A I I V N Q G N A   Q S   Q   L   Q   V   K   G   E	Q T Y S N S C Q   L G E Y   V A L   I G S H   G W V E   I E I A I I V N Q G N A   Q S   Q   L   Q   V   K   G   E	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D	E T Y S D Q P   G N P   I A L V G S   H G Y   V E   C   D   V N Q G R G   D E R   F   G   E   V   G D
Q T Y S N S C Q   L G E Y   V A L   I G S H   G W V E   I E I A I I V N Q G N A   Q S   Q   L   Q   V   K   G   E	Q T Y S N S C Q   L G E Y   V A L   I G S H   G W V E   I E I A I I V N Q G N A   Q S   Q   L   Q   V   K   G   E	R S F A D V A V A   P G E   P V I Y I N S L   E N   V G V A I I I N Q Q G S F   A K A Y T   I G T   G S	R S F A D V A V A   P G E   P V I Y I N S L   E N   V G V A I I I N Q Q G S F   A K A Y T   I G T   G S	R S F A D V A V A   P G E   P V I Y I N S L   E N   V G V A I I I N Q Q G S F   A K A Y T   I G T   G S	R S F A D V A V A   P G E   P V I Y I N S L   E N   V G V A I I I N Q Q G S F   A K A Y T   I G T   G S
R S F A D V A V A   P G E   P V I Y I N S L   E N   V G V A I I I N Q Q G S F   A K A Y T   I G T   G S	R S F A D V A V A   P G E   P V I Y I N S L   E N   V G V A I I I N Q Q G S F   A K A Y T   I G T   G S	Q T Y S D A P A G T   P I A L I G S S S N W V E   I A I A I I V N Q G N A   Q S   Q   L   Q   V   K   G   E	Q T Y S D A P A G T   P I A L I G S S S N W V E   I A I A I I V N Q G N A   Q S   Q   L   Q   V   K   G   E	R S F A D V A V A   P G E   P V I Y I N S L   L L H M A V A I I I N Q Q G S F   S R A Y   N   I   G T   G L	R S F A D V A V A   P G E   P V I Y I N S L   L L H M A V A I I I N Q Q G S F   S R A Y   N   I   G T   G L
Q T Y S D A P A G T   P I A L I G S S S N W V E   I A I A I I V N Q G N A   Q S   Q   L   Q   V   K   G   E	Q T Y S D A P A G T   P I A L I G S S S N W V E   I A I A I I V N Q G N A   Q S   Q   L   Q   V   K   G   E	R S F A D V A V A   P G E   P V I Y I N S L   L L H M A V A I I I N Q Q G S F   S R A Y   N   I   G T   G L	R S F A D V A V A   P G E   P V I Y I N S L   L L H M A V A I I I N Q Q G S F   S R A Y   N   I   G T   G L	R S F A D V A V A   P G E   P V I Y I N S L   L L H M A V A I I I N Q Q G S F   S R A Y   N   I   G T   G L	R S F A D V A V A   P G E   P V I Y I N S L   L L H M A V A I I I N Q Q G S F   S R A Y   N   I   G T   G L
R S F A D V A V A   P G E   P V I Y I N S L   L L H M A V A I I I N Q Q G S F   S R A Y   N   I   G T   G L	R S F A D V A V A   P G E   P V I Y I N S L   L L H M A V A I I I N Q Q G S F   S R A Y   N   I   G T   G L	H I Y S E V S P G Q   P I A L I G S H   G W V E   I E I A I I N Q Q G S A   A Q   Y   G   T   R   L   G   D	H I Y S E V S P G Q   P I A L I G S H   G W V E   I E I A I I N Q Q G S A   A Q   Y   G   T   R   L   G   D	P S F S Y V G   P G Q   P I A L I G S H   G W V E   I E I A I I N Q Q G S A   A E K Y   G   V   K   G   A	P S F S Y V G   P G Q   P I A L I G S H   G W V E   I E I A I I N Q Q G S A   A E K Y   G   V   K   G   A
H I Y S E V S P G Q   P I A L I G S H   G W V E   I E I A I I N Q Q G S A   A Q   Y   G   T   R   L   G   D	H I Y S E V S P G Q   P I A L I G S H   G W V E   I E I A I I N Q Q G S A   A Q   Y   G   T   R   L   G   D	M T Y G D V P Q G A L   L A L I G S H   G W V E   I E I A I I N Q Q G S A   A K M   L   A G   Q   V   G   D	M T Y G D V P Q G A L   L A L I G S H   G W V E   I E I A I I N Q Q G S A   A K M   L   A G   Q   V   G   D	R T Y S D V P   G   A L   V   A L   I G S H   G W V E   I E I A I I N Q Q G S F   A K A Y T   I G T   G S	R T Y S D V P   G   A L   V   A L   I G S H   G W V E   I E I A I I N Q Q G S F   A K A Y T   I G T   G S
M T Y G D V P Q G A L   L A L I G S H   G W V E   I E I A I I N Q Q G S A   A K M   L   A G   Q   V   G   D	M T Y G D V P Q G A L   L A L I G S H   G				

QUERY	S I T V S P
UniRef90_UPI000475C374	D W R I T
UniRef90_M5PDL1	H W R I S
UniRef90_I0JHH1	S W Q I T
UniRef90_K2FJ56	D W H I
UniRef90_N4WL07	N W R I
UniRef90_A0A024PLM0	N W T I
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UniRef90_B7K3L6	Q V S L H P
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UniRef90_B7KKT6	P I E V
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UniRef90_D0Z9A5	E W Q I T
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V F R T G L L N

ILLUSTRATION

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 K T Y S D S E P G D L I A I T G S D G W V E I A V N Q G S F S K A Y N I Q T G T  
 K S F A D V Y V G E T L V Y V N S L D N L A V A I V N Q G S F S K A Y N I Q T G T  
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 Q T Y S D R P L G E L I A L I G S H G W V E L A I V N G G S A Q S E L Q L D Y G D  
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 A S F G E V A V G E P L V Y V N S L L N V S I A F N Q A N F A K A H N I A S G A  
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 H S F A D V G L G E T I A Y I N S L I N L G I A I N Q A S F S D T Y Q I A T G N  
 N T F G E P V G E P L V Y I N S L L N V A V A L N Q G N Y A A A H H I G S G R  
 K A F T D V D K G E P L I Y V N S L L K L A I V N Q G S F A A T Y Q I G T G E  
 D T F E A V P A G D R L A T V G S H G Y V E L D V N R G R G E T A F E L A V G D  
 Q T Y G F V G Q K K P L A L I G S H G F L E I A V N K G N A A L Q F G L K S G D  
 K T F S D V E G K P L L F I D S R G R L S F A L L N Q N D F A K T Y N I K P P A  
 H T F G G V A K G K P L V Y L N S L L D V A V A L S Q Q G D F A A K H H V E S G V  
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 K T Y S D V Q Q G E L V A L I I G S H G W V E I I A V S C G N A Q E L G I V N N G T  
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 R S Y A H V E P G E R L V T V G S H E N V E L A V N Q G R G A E A F G V G V G D  
 T T Y S D I E L Q Q P L A L P G H G W V E V A V N Q Q G D A S T K L P C S V G D  
 P S Y G F A K R G E L I A I I N S E N F L E F A V N Q Q G D A S T K L P C S V G D  
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 N S F G D V P D G K P L L Y Y N S L D C L S M A L N M D N F A A V H K I E Y G G  
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UniRef90_UPI00047EA013	T V E   V
UniRef90_UPI00034C2D20	P V E   V
UniRef90_K9WJJ3	E I   E   V
UniRef90_A7HJ64	I V H   Y N P
UniRef90_UPI0003FD8FFE	K F R   V R
UniRef90_UPI0004785C09	L V K   L R
UniRef90_A8F7Y5	T V T   L
UniRef90_E4NMW7	D W Q   V
UniRef90_E4SWP9	P V R   V A
UniRef90_B61UL6	E V C   V E P
UniRef90_UPI000377C033	T V E   V
UniRef90_Q2LRP9	T V A   V T
UniRef90_K1YSB6	V V R   L T
UniRef90_Q31QD5	A I   T   V T
UniRef90_X5JUF4	

1            10            20            30            40

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G H I A I H D E R F G N I I T N I T G E T L S K K N I M V F G E K C T E I P F V  
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 G R I I H V D N F G N C I T N I T R D F I A Q H G V E I G I L D Q Q I G R I C C  
 G Q V L A F D R F G N A V T N I R Q G H G P G R R V R V A G R E I P V V  
 G T I D I L D V R F G S L W T N I P S S T L D T I S V T I Y H N G I K H I L F G  
 G E T L A A D H F G N L V T S I R E E D L G G A A V A H A Q V G E E R V R F V  
 G C I Q Y V D G F G N L V S N V S A A A V S D R A W S L I L P S G T V V P G C  
 G I I D T H D V R Y G S L W T S I P R T L F R E L G I A H G D R V T V R I H Y A  
 G Q I I S I D R F G N L I T N I T R T H V E S L A L E V I G K K K I L G L S  
 G T I D I I D R P F G N L W T N I E R T Q F I K G A K Y G D I Y Q N F V T Y G  
 G W V V H V D H F G N C I T N I R R P A M A E A A L K T Y A G N T T L Q A L H  
 G E V L V V D D F G N T I T N I V P G D L F A D C E E V V V D G I T V P V V  
 G T I D I L D V R F G N L W T N I N K A Y F E Q L E V S I Y D Q N R Q I M S F G  
 G P I I P L D L Q Y G N V W T N I D V K N I E K L K N L K V G D R I L V K I P Y A  
 G V I Q S I D R F G N G I T T L P G N W V E G R N W R A W I K G I T I R S A  
 G E V L V V D G F G N A I T N I V P G D L L D G R D R I R V D G T A W P V A  
 G E V L S V D H N G N V Q T S I T A A D L E A L G I R V G D R R Q F T T V Q L R  
 G V I Q A I D H F G N L I T N I P A Q A T A A R S W R L T V G E H E L R A V  
 G N I P I L D V Q Y G N I W T N I D R N T A S K M N I K K G D I F T V E I P F A  
 G C I Q Y I D Q F G N L V T N I P S T F L K N K S W Y V Q I G S L R I N S Y  
 G C I Q Y I D R F G N A I S T I P G S Y V E G K T W H I V V G N L K I K G G  
 G C I Q A I D R F G N A I S T I P G E V V R G R Q W L A I A A G T A I P V V  
 G V L H V D R F G N C I V L N L R A G A L G P L N L Q I S T P L G R E L P A V  
 G C I Q Y I D Y F G N L I T N I P G T L V A G K S W S V E S D R D F V I P S G  
 G N I D I F D R F G N I W T N I S I D E F K T L S V T I R H R N Q N A I P F M  
 G E V L A V D H F G N V Q L A H S V I A D F A G A D V V E V G E R A Y P V P L R  
 G A V L V V D G F G N A I T N I V P G E A I E D R F G Q Q V R I N G E P A P V R  
 G S L Q Y I D H F G N L V T T I P G D E L T S Q L W Y V Q L G T Y I C P Y R  
 G T V L S V D R F G N I W T N I P S R I G L S H E F V F T A A G R D I R R F H  
 G H V I R V D R Y G N A I T N I S K E L F D K L N F T I E I G R E R L D R L H  
 G E V L V V D R F G N V V T T N V P G D L I R G R D W I R V N G D L T P V A  
 G T I V Y V D H F G N L M T G V R A S G V G A K A V L R V R G Q P L P R A  
 G E V I H I D H F G N V I T N V P K E M V K D A K G I E V I G K T V R F L  
 G I I D V L D V R Y G N V W T N I S R L Q L A D L Q V Q Y G N L V K V T I K Y G  
 G E V I H I D R F G N A I S N I D E G M L R E F A A K G R A R A Q I R L P L V  
 G E V L V V D G F G N A I T N I P E S V L L D R D E I T V N G E R V P V R  
 G W V V H V D R F G N C I T N I R R E T L G Q P A V K C Y V G N T I L D Q L H  
 G S V I Y I D S F Q N V V T N I T K E F F G R R F V L Y F K R N E T I N H S  
 G C V Q Y V D H F G N L I S N I P G I Y L Q G K T W Y V Q A A G L K I S G C C  
 G S I Q Y I D Y F G N L V S S N I P G D C I Q G K K W C V Q V S G L M I P G C  
 G E V L Y S D I Y G N L I T S L T G S D L P G E W S V R A G D H L I A E L Q  
 G R V V H V D H Y G N L I T N I T Q E M F D K V H Y S V M F S R E Q V E Q I S  
 G E V L T V D H F G N V Q L A A S G S L L E P L P R S L R V E R Q P A V R V  
 G T V L Y A D V Y G N L I T S F T G D M I T G K E E T I R T E N G D I L S V Y  
 G E V A Y I D D K F G N I E T N I P F D W I K G Y E V K I C I K R K L I L P V L  
 G I I V Y I D H F G N A Y T G I R E G E L K I L G E Y G D E L R V V I P F L  
 G M I E I L D I R Y G N V W T N I P P K L L F A S A G V T I T R S G Q E T L P Y L  
 G I V Y V D V Y G N A M T G M R A S T L P A D A V L G A A G T R I A R S  
 G A V L I V D E F G N C V T N V P G E V L D G R E A V H V G D S T V V V G  
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 G Q V L F A D H F G N L V T S I K G D A L L D E K A W N V K T E T I Q S I P L S  
 G E V L V V D D F G N V V T N V P G D F L A G H D R I A A N G T V V P V G  
 G E V L V V D G F G N V V T N V P G E V L G N R S V A R I D G E P V Q I V  
 G E I I Y F D V Y G N A I T T G L K F Q P S L K G R R L R C G G I A L P Y A  
 G E V L V V D D G F G N A I T N V P G R V L A D R F G E V V T V N G E R V V S V E  
 G E V M V D D G F G N A I T N V P G S F L D G R T R V L V N G D P V P A V  
 G S V I Y V D S F Q N V V T N I S K E L F N Q O Q N F R R N E S I K H S  
 G E I I Y I D H Y G N A M T G I R A I K A G Q C R R I R L P S G D L L V S A A  
 G A V I Y I D Q Y E N V I S N I S R E L F E R V G Q N Y F K R N D P I L K L N  
 G A I Q A V D R F G N L I T N F P G G G V V A G R P W S V V L G K W T I P G G  
 G A V I Y I D R F G N L I T N L D E E T L Q R R G I E Y V R C G E G E A P L V V  
 G E V L A L D R F G N I I T N L M T R D T V G M V K I A G R A A R L V  
 G Y I Q Y I D H F G N L V S N I P A S Y V K D K N W C V Q I A G L T I L G C  
 G H V V H I D R F G N C I V L N E A G S L G T A G L R M E S P S G G P L A Y A  
 G E V I H I D R F G N A I T N I K K E Q L Q D N L P I Y A K V F Q K I P F S  
 G E V L V V D D F G N V V T S V P G D Y L E G R D R V L A N G E P V P V G  
 G Q I L Y I D N F E N V I V N I T K E D F D R R R F K I V F K R D E V I T I S  
 G Q I L Y I D P A P W K E G N L V R V Q I G K I T L P C V  
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 G E I I Y I D H Y G N A M T G I C G T K F R R G H V Q L P N G D L I S A A  
 G S V I A L D N F G N V I T S I P G T A V D A A R I S V N G Q S V P F V  
 G E I I A T D H F G N L I T S F E A E M L D R G N W M V T V A N A E P L P I L  
 G E I I Q A I D H F G N L I T N I P G E R F F N C S W S V Q I H Q S I Y A G H  
 G E V L T E D R F G N A I A T L T Q A P L G G W V R V G G H R V P I R  
 G I L F V D R F G N A V T N V P A D L V K K L D A K G F Y G S A E F P L V  
 G Q V V E I D H F G N L I T N I D A S D L P K A S F K V I I G S F P I L G L T  
 G E V L V V D D F G N C I V L N P G E F V E G R E S V A V N G E S V P V G  
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 G A V A Y I D P W G N L V T N I P E E L L D R V E I S V N G S R I D A L F G G  
 G Y V A Y I D S Y G T V R T N I L W R S L L R K K N L R I S S G W L F S I P V G  
 G S I Q Y V D H Y G N L I M T G L P S K M L E N K S W Y V Q E G D N K I F P Q  
 G E V I V Y I D H Y G N I M T G L R A E Q L D K N T L L R V G S Q R V A N A  
 G R V L F C D H F G N L V T S L E S S L V D T A R W E I S A E G I D G L P I V

50                    60                    70                    80

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UniRef90_H9UAB6	E T Y A D V E E G E L L V H E D S T G Y L E I A V N K G V A R E R F K C F E G C
UniRef90_M7T8R9	K S Y G F V K K R E M L A T I G S S N L L E I G I N Q G N A A K K L S I K E D D
UniRef90_F21B85	Q S F Q S V P Q S R A L I Y C N S L L N L E I A V N L N K G N F S T T Y G I G T G E D
UniRef90_G8QS93	K S F T E V K Q G E P L I Y V N S L L N L E I G I A L N K G N F S T T Y G I G T G E D
UniRef90_A9B677	R T Y A D S E W G M V M A L F G S S E R L E I I G V R R N G N A A R M L G V G I G D
UniRef90_UPI00046D3291	R T Y A E V D P G E A L A L W G S S D R L E I I G V R R N G N A A R M L G V G I G D
UniRef90_D4YHQ3	H S F A D V S V G E P I G Y I N S L L N L G V A I I N Q K N F A E T Y G V G T G I
UniRef90_A7HAG8	R T F G E A A P G E L V V A Y V G S S G R V E V A I I R E G S A A A R L G I R G V
UniRef90_U5DJZ1	R S Y S D R A P G G V V A L V G S S H G W V E V A V N C G S A K E H L Q L E V G D
UniRef90_C7M9S6	H S F A A V E V G E S L L Y V N S L D R M A I A I N R G H Y A H A F S L G S G S
UniRef90_I3IKH9	K T Y A D V S D G K D L I Y V N S L D N L G I G N Q G S F V D A Y K I G I G T
UniRef90_W7D325	R S F A D L R V G D A L I Y V N S L D N L G I G N Q G S F V D A Y K I G I G T
UniRef90_D5HA98	P T Y G A V P E G D P L L L F G S T G Y L E I A A N G G N G A E L L D I R K G D
UniRef90_J3JH49	D A F A D V S R G E R L L T V G S H G Y V E C D V N R G R G D K A F G L T V G D
UniRef90_K0J5Y0	K S F A D T Q V G E P L L Y V N S L E K I G V A L N Q G S F A D A Y H I K T G S
UniRef90_I2EZP9	H T F G D V K E G E V L S Y M N S L M N L S F G N M G D F S K K F G V G S G N
UniRef90_Q2JTG1	A T F A E G S E G E L L A L V G S S G W V E I A Q N R G N A S R T L D F K V G D
UniRef90_R4VVP4	D H Y A A V D V G D G L V T V G S H G N V E L A V N R G R G A D R F E V G V G D
UniRef90_D6Y934	E T F T T V P P G E L V A F T D S A G L V A M A V N A G D A S E R L G L P P G A D
UniRef90_U5QMN0	T T Y G E G E L G E A V A V L V G S H G F I E L A V S G G S A A A M L A L R P G D
UniRef90_D1ALZ8	N S F G D V P E G K N L M Y Y N S L D S L S F A V N M G D F A S T Y K I E Y G G
UniRef90_M1WYX4	S T Y T E V Y L G E I L A L I S S H G W V E I A V N Q G N A Q L R L Q V E L G K
UniRef90_UPI0003099941	A T Y N S V P V D S A V A L V G S E G W V E I A I A I N R G N A A Q Q Q L N I Q L A Q
UniRef90_UPI000345A70F	T T Y G D V A V G E L A A L A G S H G W V E I A V N V N G G N A R D R L R L D Y G V
UniRef90_UPI000378FFB8	D T Y S D L P E G A P G L L E G S Q G F F E I A V N L G S A A R Q L G L S M G D
UniRef90_D8FXK7	T S Y S S A E S G N L I A L V G S H G W V E I A V F R G N A Q A F L G L D W W A P
UniRef90_H3NFBZ	R S F S G V E P G E P L L Y I N S L T N I G V A N Q G S F S A L Y N I G F G P
UniRef90_UP100036FBFC0	N T F G E V P A G E L V G Y E D S A G L L A I S V N V N G G D A R L L G V R A G D
UniRef90_C7P219	R T Y A T V D P G Q R L V T V G S H G N V E L A V N R G R G D E A F R V G A G D
UniRef90_K9FKQ5	P T Y G R M E L G E A L A L V G S H G Y V E I A V N V N G G N A H Q A F Q A N V G D
UniRef90_UPI0003779394	R T F G E A D P G E I F V Y A G S S G Y Y E I G I N Q G S A A A K L G I A P G N
UniRef90_UPI00040C610D	R T F G D V E Q G D Q L V T V G S H G Y V E C D V N D G R G D G V F G L Y P G D
UniRef90_M0PJV9	R T F G C E V E P G Q A F W Y E N A L G L I E L A V N Q G R A D R Q L A L R V G D
UniRef90_D3RMW5	P S Y G H A K K G E L I A L V N S E N F L E F A V N Q G D A S K R L A L E V G D
UniRef90_B5IFP7	U n i R e f 9 0 _ U P I 0 0 0 3 7 0 0 5 7 A
UniRef90_UPI000370057A	R S F A A T E K G E S L I Y I N S L D N I A V A I N Q Q S F A K K Y K I G T G V
UniRef90_A0L144	S T Y G D L E P G A A M A L I G G G G H I E I A V N R G S A A D R F R I A P G E
UniRef90_G2MHS4	D A Y A A L E P G E R L V T V G S H G N V E F A V N Q G R G D E A F G L G V G D
UniRef90_UPI0003B55F0C	R T Y G D V A A N E P V L L F G S S G F L E V A V R G G S A A E L L S I S K G D
UniRef90_H1YC58	W H Y N E V P E G E K L C M F G I L S D H L E I A I N K G N A S G L L G N L Q D D
UniRef90_K9PH00	E T Y S D V G M G E A I A L V G S H G W V E I A I I N Q G N A H S Q L Q I N L Q D D
UniRef90_Q8YX88	D T Y S N V K L G E A T A L I G S H G W V E I A I I N S G D A H S Q L Q I N L Q D D
UniRef90_B4S452	R T Y G D V S E G G T V A Y T G S T G L L E I A I R N G N A A R T L L G L H E G D
UniRef90_UP100035EB4F9	R T Y G D V A P G E L L V H V D S T G Q V A V A V N V N G G R A A D L L G V T P G D
UniRef90_A4X4S2	R T Y A D V A Q G V A L A Y T G S S G F L E I A I L R N G N A S G I L L G E A G D
UniRef90_B3EMK5	S Y Y S E I D K G Q L L I H N D S T G F V E I I A A N Q S N A S K I L S L K P G D
UniRef90_A6LP82	R T Y G D V A V S E G E C V A V F N S S G N V E I L S I N R G S F A Q R F G V E E G D
UniRef90_E1QS62	R T Y G D V A V S E G E C V A V F N S S G N V E I A I C H G N A S E L L G Q Y D S
UniRef90_X0UVV8	P S Y D A V G A G E L L A S L G S G G T L E E I A V A R D G S A S E R L G V D R D E A
UniRef90_B1XMT7	C T Y G D V P K N H P C A L V G S H G W L E I S V N Q G N A Q H F F Q V V Q R G A P
UniRef90_E1R7H1	D F F S A A E P G E D L I Y N N E L L F V S L S T N Q G S F A E K H G I Q S G P
UniRef90_D3NQI8	R T F G A V V G P G Q P L W Y E N S N G L A E I A V N R G R A D R A L G L A V G D
UniRef90_L0ICC1	R T F D A V D P G D P V V V L S G S H G L V E E L A V N R G R G D E D A F D V T A G D
UniRef90_V4HE26	E T F F A D A P A G D P L V T V G S H G Y V E C D V N R G R G D E A F D L A P G R
UniRef90_A1B112	T T Y G A V A D Q E I V A Y C G S Y V G V E I I G V R R N G N A A Y R T G L K A G D
UniRef90_L9WET2	E T F F A A V S P G E R L A T V G S H G Y V E I I D V N Q G R G E A A A F G L E A G E D
UniRef90_M1XU32	R S Y A H A E A G E A V V V I V G S H G N V E C A V N Q G R G D D R F G V E P G D
UniRef90_H5SHT8	R T F G E A A K G E A F W Y G N S M G L V E I A V N Q G S A A R Q L G L S V G Q
UniRef90_W0JX28	R T Y A A V V G S G E R L V T V G S H G N V E E L A V N R G R G D E A F G G V E P E S
UniRef90_L9YW60	E T F F A A V S A G A R L A T V G S H G Y V E E L D V N R G R G E E E A F G L A P G D
UniRef90_F4CEX9	W H Y N E V P E G E K L C L F G L I S N H L E I A I I N K G N A S G L L G Q V G D
UniRef90_D5BVS1	Q T F H D V A P G E G F W Y V N S L G L I E I A V N Q G C A A K R F K L E V G T D
UniRef90_F4L238	R N Y Y D V A V G E T L C L I N S A D Y L E E L A I I N M G K A S S M L G L K L E D
UniRef90_Q7NCQ6	H T Y S D V P R G E T L A L V G S H G F V E E V A V A G G S A Q G V L D Q T V G A
UniRef90_S0EU60	R T F S D V E V G C L L A Y R G S G G R L E E L A I I R E G D A A K T L G L R P G S
UniRef90_UPI00047A29ED	H T Y G D A A T G E L V A L V G S S S G F V E I I A V R E G S A A A A A L G I S R G D
UniRef90_D7DW40	A A Y S D V E I G E A L A L V G S H G W V E E I A I I N S G N A Q K L Q V N W Q D D
UniRef90_F0JK7	V K Y A D M P E G P G L L E G S Q G F L E E L A V N Q R S A A K R F G L S M G D
UniRef90_UPI00037E8ECB	L S Y S G K V N V Q G P L C L F G S G N R L V E I A V N C S S A E K Q L K I K I G T
UniRef90_L9WQ50	D A F A D V P V G R R L A L V G S H G Y V E E L D V N R G R G E A A A F D L A V G D
UniRef90_B8FBT9	D T Y S E V V G R G E L L A L I G S S R G F L E E I S V N M G N A Q E A L Y A G P G A
UniRef90_E1R7H0	U n i R e f 9 0 _ E 1 R 7 H 0
UniRef90_U1PVN6	K S F S D A A Q G Q S L V Y I N S L L N V G I A V N Q G N F S R A H N I E S G R D
UniRef90_D3PP26	S T F T G V D T G E P L L T I G S H G F V E C D V N H G R G T E A F E L T T E D D
UniRef90_UPI0003726D95	S H Y A E V P V G S A L A Y V G S A G L L E V A V A I H L G N A Q E Q L G L K Q G D
UniRef90_B3DVY3	E T Y A C V P Q G E K V A F F N S S G Y L E E I A I I N K G N A A G L F G L Q
UniRef90_Q8DGY5	R T Y S E L P L G K I G V L Y N S S G Y L E E I A I S N Q G S A A K L F K V Q S G A
UniRef90_Q3J8U0	H T Y G D A P P Q H L I A L V G S H G F I E I A V N Q G S A H S L L G C Q N G D
UniRef90_U1NQ21	Q T F S D V D M G D A F W Y V N S L G L I E E I A V N Q G C A A E L F K L D V G V
UniRef90_B3QL43	Q A F A A V E P G S A L V T T G S H G Y L E C D V N Q G R G E C Y F D L S T G D
UniRef90_UPI0004773113	R T Y G E V E Q G K P L A Y I G S S G M V E I I A I R N G N T K A E L L G I G E G G
UniRef90_K7QYP4	T T Y A D A K V G E I I G L I G S H G W V E I I A I M H G N A Q S Y L K L G I G T
UniRef90_F2KQ22	R T F G D V P V G Q A V A Y L G S S G G L L E I A I L N R G S A R E A L G L K E G M
UniRef90_UP100029B553F	K T Y S C V E E G E P L A L I G S F D T L E E L S V R N G D A S R T Y D L K S G K
UniRef90_M0I8L3	H C Y A E G D P G E P M T L V G S A G R L E E I A I V R D G S A A E E F Q S P L G Q
UniRef90_S0KCV7	H T F E T V S R G E R L V T V G S H G N V E C D V N H G R G D E A F G L S P G E
UniRef90_G7WK0	R S F A Q V A P N E A V L Y N S L L N V G I L G R L E I A V N M G S A A G A L G V A E G S
UniRef90_G7V981	T T Y A D V P V G E W V V L V G I L G R L E I A V N Q G R A D L Q L S V G V G D
UniRef90_K9Z4F1	S T Y S N I K K E L T L I G S H G Y V E I I A I I N Q G N A K M I L N K E Y G D
UniRef90_B8GV31	R T F G A V P A G A A F W Y E N A F G L V E I I A V N Q G R A D L Q L S V G V G D
UniRef90_B3EFW8	K T Y E D V D E G K L L A Y R G S F D T I E I A V R N G S A A G R T G L K D G A

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UniRef90_H9UAB6	E L E I I
UniRef90_M7T8R9	K V E I I
UniRef90_F2I8B5	D W Q V S
UniRef90_G8QS93	G W I I S
UniRef90_A9B677	S L R I R
UniRef90_UPI00046D3291	P V L L V P
UniRef90_D4YHQ3	D W Q I A
UniRef90_A7HAG8	P V R L A
UniRef90_U5DJZ1	C V E V R
UniRef90_C7M9S6	S W R V T
UniRef90_I3IKH9	K I S I R
UniRef90_W7D325	N W I V T
UniRef90_D5HA98	S V K L
UniRef90_J3JH49	S V Q F S
UniRef90_K0J5Y0	K I Q I R
UniRef90_I2EZP9	N W K V
UniRef90_Q2JTG1	E V R V
UniRef90_R4VVP4	D V A I R
UniRef90_D6Y934	H V R L S P
UniRef90_U5QMN0	P V E
UniRef90_D1ALZ8	D W S V
UniRef90_M1WYX4	K I S V
UniRef90_UPI0003099941	T V E V
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UniRef90_H3NFZ6	D W H I
UniRef90_UPI00036FBFC0	P V R V S P
UniRef90_C7P2I9	R V E L S
UniRef90_K9FKQ5	A V E L
UniRef90_UPI0003779394	P V
UniRef90_UPI00040C610D	V V T I
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UniRef90_B5IFP7	K M E I
UniRef90_UPI000370057A	D W K V
UniRef90_A0L144	I V E L S
UniRef90_G2MHS4	P L R V
UniRef90_UPI0003B55F0C	T A K I
UniRef90_H1YC58	S V I I
UniRef90_K9PH00	P V E V
UniRef90_Q8YX88	P L E V
UniRef90_B4S452	R V S L
UniRef90_UPI00035EB4F9	Q V Q I S
UniRef90_A4X4S2	R L R V T
UniRef90_B3EMK5	R I T L
UniRef90_A6LP82	K L E L R
UniRef90_E1QS62	E V E I S
UniRef90_X0UVV8	E V E V T P
UniRef90_B1XMT7	M V I Q
UniRef90_E1R7H1	E W K I R
UniRef90_D3NQI8	V V T V E P
UniRef90_L0ICC1	S V T L T
UniRef90_V4HE26	S V V L S
UniRef90_A1BI12	P V R V
UniRef90_L9WET2	Q L V L
UniRef90_M1XU32	A L R I
UniRef90_H5SHT8	A V
UniRef90_W0JX28	P V E L A
UniRef90_L9YW60	R V V L
UniRef90_F4CEX9	I I R I
UniRef90_D5BVS1	P I E
UniRef90_F4L238	T I Q I
UniRef90_Q7NCQ6	P V I L
UniRef90_S0EU60	K
UniRef90_UPI00047A29ED	T V V L S
UniRef90_D7DW40	G L E V
UniRef90_F0JFK7	P V E L A
UniRef90_UPI00037E8ECB	E V R L
UniRef90_L9WQ50	R I V L E P
UniRef90_B8FBT9	R V T V S
UniRef90_E1R7H0	G W V V R
UniRef90_U1PVN6	T V Q I T
UniRef90_D3PP26	R V E L
UniRef90_UPI0003726D95	S L L I H P
UniRef90_B3DVY3	P I K
UniRef90_Q8DGY5	M V S I R
UniRef90_Q3J8U0	W W R
UniRef90_U1NQ21	S I V
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UniRef90_UPI0004773113	V V
UniRef90_K7QYP4	R I T V R
UniRef90_F2KQ22	T V T L
UniRef90_UPI00029B553F	D W T I
UniRef90_M0I8L3	A V R V R
UniRef90_S0KCV7	Q I S V
UniRef90_G7WKG0	F I T V
UniRef90_G7V981	E V R
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UniRef90_B8GV31	
UniRef90_B3EFW8	



	50	60	70	80
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UniRef90_G8TAR4	E T Y A D V P E G E K L A I F N A A G Y L	E I A I N K G N A A G L F G	L Q	
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UniRef90_UPI00037D09A0	Q S Y D N V E P G D C F A L F N S L E F L	E I G I N H G R G S D L L G	L K Y D S Q	
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UniRef90_M7Y1M4	Q T Y D N V E A G D C F A F N S V D L L	E I I G I N Q G H G A D L L G	L R H D S	
UniRef90_K9QH08	E T Y S D G E V G A A V A L V G S H G W V	E I I A I N G G N A N S Q L Q	I N W Q D	
UniRef90_X1BPZ5	S T Y G K V P V G A S I L L I S T G F L	E L A V N R G S A A R K Y G	L E I G A	
UniRef90_W2EIN2	E T F S A V P P G D L V A F T D S A G L	V A L A I N A G D A A E R L	L G L P P G A	
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UniRef90_W9DRF1	K T Y G E V S K W G L I S L I G S H G F F	E E I A V N Q G S A S R L L H	L L S N G N	
UniRef90_15BYC3	S N Y E E T D S G E C F A F F N H S G L	L E I G I T H G S G A E L L G	L K L D S	
UniRef90_X4R9C2	P S F A S V E V G E S L A Y V N S L D	R M A V A I N R G S Y A R A F N	I G T G P	
UniRef90_B9KY14	R T F A D V A P G M P L V A Y F G S H	G G L E I I A V R D G N A A A T W H	L L E R G M	
UniRef90_D9Q1P4	R T F A D V R P G D A I A Y I N S F G F	V E E L A I I N Q G S A A S K L	N V L N V G D	
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UniRef90_U3THV7	K T F G D A N P G E L V A Y E N S F G	F H E I I A V N R G R G D D D A F G	V D P G D	
UniRef90_B7ABH1	R T F G E A R E G E A L A I Y L G S A G	G L L E I I A V N R G S A R E A L S	L L R E G M	
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UniRef90_S3Y7W9	P S F A H V E V G E S L I Y V N S L D	R V A V A I N R G S Y A N A F H	G R G N	
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UniRef90_M0KGD8	R A Y A A V D R G Q R L V T V G S H G N	V E E L A V N R G R G D D D A F G	V V S T G G	
UniRef90_U1QSU0	E T Y A R C D P G Q R L V T V G S H G N	V E E L A V N R G R G D D D A F G	V D P G D	
UniRef90_T0MRP5	Q P F C N V A K G E I L A Y W R S A G	F L E I I G V N Q G S A C E K L	K T E T G E	
UniRef90_F2NKU1	R Y Y A E V A P G A P L A L V G S S G	L V E E I V S V R E G S A R E A L	L G L R E G D	
UniRef90_M1WKQ5	T T Y A D M P K G A P G I L L E G S Q	G F F L E I I A V N Q R S A A K E F G	L S I G D D	
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UniRef90_Q1Q4N3	N T Y A D M V T K G M P L M F I G S A G	F G L E I I A V N Q Q G N A K K H F R A	K Q G H	
UniRef90_E4KNV5	R S F A A V A I G R P I A Y V N S L I	R L R A L G I N Q Q N F A L G Y K I	I G T G N	
UniRef90_D2B7N7	E T F A A V P P G E L V A F A D S A G	G L V A L L A V N S G D A S Q R L	G L L P P G A	
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UniRef90_UPI0004727D02	R T F S D V A V G A P L V Y V N A N N	L L V E E I I A V N Q Q G N A R D D Q C L S	L R T G A D	
UniRef90_H8KQR2	K H Y N D V Q E G E K I A L F S I T N Y	L E L E I I A I N K G N A A G L L Q L G	D Q L G D	
UniRef90_W7VN89	R T F G D A P P G A L V V Y V D S A G	G L V A I I A V N S G R A A E T L H	T T P G A	
UniRef90_B3QT68	K T Y T E V A V A G E G L V A Y I S D G	F D G L V E V G M R N G H A A E R L R A R L	R L G D	
UniRef90_D3D322	H T Y G E V A V A P G E P A L C E D A	L R Q V M I A V N C H G A E V L V R	R R G D D	
UniRef90_A8AB25	R T F S E V K P G E L V A Y I N S F G	G Y L E E I I A V N Q Q G N A A K R L D	I T G H P	
UniRef90_D5E970	P T Y G K I K K N E L L I L T G S H D	F D F L E I I A V N Q Q G N A A K R L D	I T G H P	
UniRef90_D5WKT6	R V F S D V A A Q G Q A F W Y E N S I	G L V E E I I A V N Q Q G N A A K R L D	V R V G D D	
UniRef90_UPI00034CFEFF	R T F S D V A V K G E P L I L K D D C	G R I L E M A I N M G S F A E T F N	I K I G D D	
UniRef90_D3RX97	K K Y E D V N V G E P L A L T G S F N	T N L T L E I I S V R E G N A A E F F G	I E D	
UniRef90_L9ZU04	D T F F A A V P V G E R I L A T V G S H	G Y V E E L D V N Q Q G R G D D D A F F D	L G V G D D	
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UniRef90_I3Z1D0	K S Y D N V E P G D C F A F F N S L D	L L L E I I A I N K G N A A G L F G	L R L D S	
UniRef90_M0CMN4	D A Y A A R D P G D R I L V T V G S H	G N V E E L D V N Q Q G R G D D D A F F D	S V G D D	
UniRef90_Q0ABE8	R T F G C V A P G E A F W Y R N S S G	L V E E L A V N Q Q G R G D D D A F F D	L G V G D D	
UniRef90_X1KFF4	R T F G E V M L G G Y I L C Y I G S S G	M L V E E L A K N M G N L A G E L K I	L K I G D D	
UniRef90_B7F136	N Y Y S E V E K Q G Q L L H N D S T G	Y V E E L A I A A N Q Y R A N D I L K F	N T G D D	
UniRef90_G0J0M9	T N Y D E V E P G D C W A F F N S L N	L L L E I I G I N H H G A E L L G R Y D S	L L G	
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UniRef90_UPI000364EEFE	K T F S D V S L G Q Q L L Y I D S R G R	L S V E E L A I A A N R E S A A R L R A R P G E G	V A P P V	
UniRef90_A3AMXR1	E A Y G Y A S P G E T V A I L L N S	E S G Y G L E E L A I A I S M G N A A A T Y G	L K P G Q	
UniRef90_M3AEM6	R T F S D A P Q G G A F W Y E N S S G	G L A E I I A V N Q Q G N A A S S L P G	L A V G D D	
UniRef90_E6N8N3	R F Y A A E V E P G E P I L L V G	G T G Y L E E L L S I V A N R G N A S T T F G	I K P G D D	
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UniRef90_D7EAE6	Q S Y G F V N E K E L I A L I S S S G F	G L L E I L A V N R G S A A A V Y G L E V G D D		
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UniRef90_UPI0003B47EBF	K T Y G A K K G E L V A L F G S E G	G L L E I I A I N Q G S A K E V L G		
UniRef90_UPI000348FE69	N T F G E A E I G T D V C Y F N S L L N	F S L V G I D Q Q G N F S E K Y K V Y S G A		
UniRef90_UPI0003B66DB0	R S Y D S V K K G E P L L I V G S N T L	F S L V G I D Q Q G N F S E K Y K V Y S G A		
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UniRef90_UPI00037FC105	R T F A E V P A G Q G F W Y C N A M G	L V E E I I A V N Q Q G R A A S V L S T P G V		
UniRef90_G4RL31	E T Y S A A P P G A L V V L V N S E G	G F L E I I A V N Q Q G R A A S E E L L G L T A G A		
UniRef90_J1FHE6	R N Y T Q V E D G D C C C L Y N H G Q	L Q L C I G I N Q Q G N A S E E L L G L T A G A		
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UniRef90_T2GB37	I   L   T   L   A
UniRef90_A8MDP0	V   I   Q   I
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E V R A V D	G F G S L Q L A A T A A E L D P L G P S V R D A R R H D L A R G				
G E I L H K D	R F G N L I T N L P S E E L R R L R V T L G G K R L G P L P F A				
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E V I Y V D V	Y G N L V T G L S G D S V P L E A R L L L G G R E I A Y R				
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E V S T V D H	F G N V Q L A A P A E A L S P L P A T V R V G P P G P A P R G				
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D R F G N V I T N I	I R G D E F K K I R V S I K D K N Y E I Q F I				
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V V Y V D	T Y G N L M C G L Q A A C F P V D A R M Q V G E C S L R R V				
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I L H V D H	F G N C I N I P A A D M P A H E M R H K G R R T P L V A V D				
G T I D L D	D R F G N L W T N I H R H L D R L E V V I H H D F R N T M K F S				
T I Q Y I D D	F G N I I T N I K G D S V D N T E I A L K T R G Q R T K G F V				
G E V V V I D	S F G N V I T N L P P L P G A G Y Q L R S A T G I E M T L P F Y				
U N I V I D V D	R F G N A R L S I R Q E Y G D E L R L D T G D G D M A I R Y V				
G N V I Y I D H	Y G N C V T I N T R S F E K L N I E I K F G N K T I K K I H				
G N L V H I D	T F G N V I L G P N E T W D G G E T L L Y T Q T T R P L K C V				
G T I V I L D A	Q Y G N V W T N I D K K L L E E Y G F K I N E R Y K V T I T Y Q				
G C V L S V D	R F G N V V L N I D V G S Y G R L P D A P A L V I A P R A V P L V				
G V V Q H I D	R F G N L I T S I P A S V V P A E P W L V Q L E Y L Q I P A V				
U N I R F Q I D	S Y G N L I M T G L L A A P W Q N R N L K L L I N G Q S L S P A				
G H V I Y V D	N Y G N V I T N I S R K L F E S V G F K I S A R N V N F N M I Y				
G K I V Y I D H	F G N I A T T I R N V K L G E K A L V S L R D K Q L E L R V V				
G N V I R V D	S Y G N L I T I D K T T F D N K G Y T I I F G R E N S R R V Y				
G H I L H I D	S F G N L I T D V S G E Y Y L L K L R I V I E V G N Q C I Q G L S				
G M I D A I D Y H F G L I C T N I P A D V F E E N G I S F G D M L H V A I R Y V					
E V V T V D	R F G N V Q L A A P G S M L S G L G P E L V A G S V K A R R A				
E V T Y V D	R F A N V Q L A A G G P E D E L L R E W A V G D R R D R A A V G				
G Y A L Y I D I	Y G N V M T N I N E D E L G D K V E I I H Q G G K S Q C V F T				
V L Y Y V D H	Y G N L I T G L A L E A T P D A R I C V G N Q R Q L A Q A				
E I S S I D	R F G N V Q L D I A G W A L G Q P L V V E G G G A Q V P A V R A				
E V I V Y D	P Y G N L M T G L S T R S L D E K I T V N V H I V S G A				
G N V I Y I D	N Y G N V I T N I T K S L F E K V G F K I T A R R A V F N E I H				
G E I I Y V D H	F G N L T T N I D A G L L E G V K L E V Q V G R L T V Q G P V				
E V H A V D H	F G T L S L A V R V P E L A A A G L V E A G R R S W R V P F G				
D K Y G N V H T N I P M E A V G D L V Y V T M G T T I M V P F V					
G K I I Y I D	N Y G N V I T N I T K A Y F E Q V Q R Y E V M A R N Y R F Q E I Y				
G C V T E L M D T F G N L E T N I R I D Q F E S T G I R Q G E H V R V K I L Y H					
E V L T V D H	F G N V Q L A A T P P A D L E L S G L V H S E R V A V T T V L G				
G V V T A I D H P F G N I W T N I H R T D L E K L K I I L D D V L P F E A P L T					
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UniRef90_E3J0M3	V V T L R
UniRef90UPI000377CFFD	R V
UniRef90_B4UK24	T I R L
UniRef90_A0B5M8	K I V L
UniRef90_A1VF69	S V T
UniRef90_M1Z4L8	
UniRef90_X1B1P1	V I T V
UniRef90_C9RBY5	I V E L
UniRef90_Q1AXW9	R V R L R
UniRef90_G8X717	T V S V
UniRef90UPI0003713E5E	R I R I A
UniRef90UPI00026C7940	D W V I T
UniRef90_G7Q6T4	A V T L
UniRef90UPI00037C3BAF	P I Q V R
UniRef90_K2LQP7	A V F I K P
UniRef90_A0M2N0	T I T V N
UniRef90_M1PE3	D V C I
UniRef90_L8JZN2	P V T I N
UniRef90_X1NNJ3	K V R I R
UniRef90_C5EQ38	D W T M
UniRef90_R4LP99	V I R I A
UniRef90UPI000375BDCB	V V H L R
UniRef90_B8D5C3	R
UniRef90_H8Z347	A L T
UniRef90_A0LSH1	L L R I R P
UniRef90_K2LFU1	T V G V N
UniRef90_A6EPK0	S V T I N
UniRef90_M1ZEX3	P V S V T
UniRef90UPI00047D005E	R V T L
UniRef90_I2F5X3	P V
UniRef90_10WF90	P V S I N
UniRef90_R5AI28	A W S L
UniRef90_D8HKX9	E C T I T
UniRef90_W0W999	K V R V
UniRef90UPI00040E152A	T V T I
UniRef90_Q02BF9	A I E L
UniRef90UPI000299F546	T V T I
UniRef90_U5QMV8	G V V M R
UniRef90UPI00041C2C35	T V T I N
UniRef90_X1K023	E M K V L P
UniRef90_T1BVP9	P I E M R
UniRef90_E1YD18	R I R I
UniRef90_Q8TX68	R L E I
UniRef90UPI0003697E3F	E I A V
UniRef90_F4GHK7	D W M V S
UniRef90_E8N575	P I I V
UniRef90UPI000465C95F	V L Q L
UniRef90_U2K6Z0	Q W T V
UniRef90_A1WV95	P L R W R P
UniRef90_A8UNQ1	T V T I N
UniRef90_I3YZ94	T I M V N
UniRef90_A6GYJ7	V V N V N
UniRef90_A3XRL2	A V S I T
UniRef90_Q608K5	G V
UniRef90UPI0004763FC3	R I E I
UniRef90_U5Q6A9	E I K I R
UniRef90_F6BCS1	E I E I
UniRef90_W0BB74	D W T I T
UniRef90UPI0004288909	V I Y I N
UniRef90_F9VMT1	D I C L
UniRef90_E8QY68	P V Q V
UniRef90_L0DPP6	T V W I S
UniRef90_D9V883	E C T I T
UniRef90_B8DRQ2	E V
UniRef90UPI0004756627	E L R I
UniRef90UPI00047AFBA1	S L T L A
UniRef90_S0FXA8	P V V L T
UniRef90_B5YJH2	
UniRef90_D8PG69	R I E L
UniRef90_F5YPW6	A V T L N
UniRef90_E1RC62	A V T L S
UniRef90_D5TZT3	K L R V
UniRef90_S7UKN1	L A R I
UniRef90_F4B7Y5	D I C L

1 10 20 30 40

UniRef90_X1CL25	G E I I Y   D H F G N C   T N I   L N T   D I R E L F   S K K R I K V K
UniRef90_E4TM84	G H V V H   D D Y G N L I T D I L K Y D Y D G K S V Q I K F R N Y S   L T G V Q
UniRef90_T1BU81	E V I H   D R Y G N A I T G W M G E E V N   H N R S L R G P H T L A Y R
UniRef90_H6RF01	G H V R H   D G R G N C   T D I D R T L F K E A G I D M R A R S D I R R I A
UniRef90_V5QF93	G H V V Y I D H F G N L I T D I T P Q M L P D K S I R L E I S G R T V Y G   C
UniRef90_UPI0003820FA4	E V L T V D H Y G N V Q L A A T A A E L D R R L L V R S G N D E L L A S R G
UniRef90_C8PMN2	G T V S S V D K Y G N L T T D I T E A A L K G K G Y E L G G D D K T V T A P F V
UniRef90_C7P6C6	V I H   D R F G N V I T N I R A E L Y D E L L I K I K G E K I I K C K F V
UniRef90_UPI000468DF8D	G S V M Y   D H F G N V V S N I S K K Q F K G R N F E I L L K S K S I K T I L
UniRef90_XOTF58	I I Y I D N F G N I K T N I S A D M V K K I K V S V G K N T V D   I P F A
UniRef90_K1ZI5W	S I W Y V D S F G N I K T N I L A S Q I N S V V D I C I N N R K F K C K F L
UniRef90_F8C5P0	G T V I G A D R F G N L L T D I H H L D L D R L A F E I Q I R D I R L P G L S
UniRef90_S7TTC2	G S I I Y V D N Y G N V I T N I K R K F F E G R N Y K I S A R N H S F N T I Y
UniRef90_T2KIQ0	G E V I Y I D H F G N L I T N I P N E N E T T E F R K N K K I P V K
UniRef90_X1R5K2	G K I I L F D R F G N A L T N I S A D D L V N L K A R Q V S C Q N Y L F P L C
UniRef90_I3CD76	T I I H   D T F G N L T L N L S G E R F K E F S Q G A G D K K I S I N E S C
UniRef90_UPI0003B56678	G K I V Y I D N F G N C I S N I K E E H L K G G F D K I I L K N L I F R H L E
UniRef90_UPI0003B5E74A	G E V I S V D R F G N L R T N I D Q T L L A R Y G Y D C V C G D R R L P V G
UniRef90_V4J6E0	G Q I V Y I D S F G N C V T N I S Q K Q F N G R K F E I E I K N K K L S R L H
UniRef90_A3J0F1	E V L T V D H F G N V Q L A A S P A D L E G L S G T V S S A H V L V V G
UniRef90_M2Y510	G N V I Y I D N Y G N V I S N I T K K L F D E L I G Y K L Q A R G A D I S K I H
UniRef90_F4AY73	G N V I Y I D H F G N V V T N I S K K Q F K G R P Y E I V M K P K S I K T L L
UniRef90_J2JGW6	I W N V D H F G N I L L G C H V S S P P E R I L L P D A P M I I P Y V
UniRef90_10IPM1	G S V I Y I D N Y G N V I T N I Q K S L F E G R K F E I N A R N R K I N Q H
UniRef90_UPI000363D60B	E V L G V D T F G N V Q T G V D A P L G A H V H A Q V G D R S V E A V V G
UniRef90_UPI00036CF146	G H V I Y I D N F G N V V S N I S Q K L F K G R E F I I S A R S T K F H K V Y
UniRef90_K4IEA7	G H V I Y I D N Y G N V I T N I K R T F F E K I Q F K I S A R N K T F D I I F
UniRef90_G2EGW1	E V I Y V D T Y G N L M T G L L A Q K M S D Q L M L N N Q V I A G A
UniRef90_UPI0003B43DA1	E V A I L D K F G N I R T N I E A A D W G E K I I L K H K N N Q V N L A V A
UniRef90_D1CEX8	G G V L Y V D R F G T M V T N I G R E Q L R D H V W E V L V N G I P I G P V R
UniRef90_X0W3F3	G I V L K V D K F G S L I T N I L M P A D V G G I E F Q I K V G N A T V T K L L
UniRef90_Q1IKS0	T I I H K D R F G N L L V N I P Q T L P E R M C I P L S G N D D G C V K R V
UniRef90_C6BU25	UniRef90_S7XDN3 G S V I Y I D N Y G N V V T N I K R N F F E S I Q F E V F A R S H K F E K I H
UniRef90_AOA023BVM3	G S I I Y I D N Y G N L V T N I T R K L F D E L I G F K I T A R T A V F E D V Y Y
UniRef90_UPI000365E883	G S I I Y I D N Y G N V V T N I K R G F F E G R K F E I S A R N Y T F K K I Y
UniRef90_D6SDQ6	V L H R D H Y G N N L V L N L D I D W A G R L Q G A R M R I G G Y E M V L V
UniRef90_M7MCW2	G S V I Y I D N Y G N V I S N I K K A F F E K I Q F E I S A R N Y T F K K I Y
UniRef90_H2C6T1	T V V H   D H F G N V A L A K R V I E D V P R K R V K I V G E R E F E G T T A
UniRef90_UPI000255A526	G S I I Y V D N Y G N A I S N I T K E L F Q E Y G F K I S A G R Y T T H Q I L
UniRef90_A9DZS8	G N V I Y I D N Y G N V V T N I T R K I F K G R N F E I S A R N Y K F K T I H
UniRef90_H6RF5	G N V I Y I D N Y G N V I C N I N K S L F E E R N F T I I Q A R S I K F T T I Y
UniRef90_UPI0003B37990	G T I V E I D D H G N A V T D L E I A P F T E R G W K L L G D G D K I Q I K F V
UniRef90_UPI000479D0EF	G Q I L F I D N F E N V V V N I T Q K D F E E R N F K I E V K R Q E V I K I S
UniRef90_UPI00047E5BF3	G S V I Y I D N Y G N V V T N I T R K N L F D G H R P F I L Q A R N N Q K L T I H
UniRef90_C4XQ03	V L S V D V F G N V V T S C D V E R F G N F Q A R L I A P V G R E L A R A
UniRef90_F3YX21	S V L H A D R F G N L V L N L S A A S W S G G Q V R V Q S G A G R S M G F G
UniRef90_F4GHJ4	G A V Q D I D K Y G N I T A D I A E S A M T E A G Y A L G D D R S F T A P Y V
UniRef90_V6YZE7	Q N Q V T Y G
UniRef90_B0C3C1	G N I Q A I D Y F G N L I T N I P A S E V Q H   S W S L Q I D Q H H   I H S T T
UniRef90_T1A113	V W N I D H F G N I L L G Y H   S D P P R Q I T L P D A P S F I P Y V
UniRef90_A0A023X0S8	V T D V D R F G N A R L I S V R Q S Y G D D L K L D A G D G Y M D L D Y V
UniRef90_Q59045	V I H   D R F G N I I T N I K K D E V D T I M I K I R H E K I I K C K F V
UniRef90_D5VS63	V I H   D R F G N I I L G I R D F N L D E V E I V F N G E K K L V A K F V
UniRef90_UPI0003F5E279	G T I Y I D H F G N C V T N I T K K A F D E V A F E I K F K N K T L N R V H
UniRef90_X1G505	T I I Q Y I D T F G N L L T T N I T E T S I G K E I L V M L Y K N Q E Y R G K F T
UniRef90_Q3Z6A3	G H V V Y A D H F G N G L V T D I T P Q M I L P S G K P V G L E L G R T I H L C
UniRef90_UPI0003AD4CD4	G V L Y T D R F G S L V L G A E R G D L A D V A W D D P A P G G V R V T F E
UniRef90_F6GCI8	G S I I Y V D N Y G N V V T N I K K T F F D N R T Y E I S A R N H K F K K I Y
UniRef90_UPI00037C8EE7	G H I I Y I D N F G N V V V S N I S R S F F K G R D A I T A R S T K F N S V Y
UniRef90_D3SNP4	G K I L Y F D R F G N A I T N V E C G P Y R E A I F R G E R I K V V
UniRef90_G2PJJ3	G N V I Y I D N Y G N V V T N I Q K N L F E G R D F E I I A R T T K I K Q V H
UniRef90_A0L602	I T H   D R F G N V V T A L K Y I D C W A S A A L V V N G I S I T K W V
UniRef90_D3D173	E V I L A D H F G N L H L A S A V D R L D S F S L S V G D A G E H R A T Y V
UniRef90_N6VSN9	V I H   D R F G N I I T N I R E N E V D D V E I E I F G K K R I K C K F V
UniRef90_K2P3J2	G N V I Y I D N Y G N V V T N I P R K L F E K R N F E L W A R N H R F T N I H
UniRef90_D3HSZ8	G T I V I L D P Q Y G N L W T N I D Q Q L E K Y G V K D G A C Y K V R I Y F Q
UniRef90_T0Z7G4	D R F G N V V L L I G Y R A F T T P P D K V V V E G I G L P F P Y V
UniRef90_H8XTX5	G N V V Y I D D F G N C V T N I S Q K Q V E E L N A S L R F F N K K I D K I R
UniRef90_F5T9U4	K F G N V V L L I G L S E E R L Y Q A G Y Q V G D D E E L I L P L C
UniRef90_H1XWB1	I V S V D H F G N I I F A L S R E D L K K K S I K L V N K T F S S Q T I L
UniRef90_UPI000400350B	V L Y T D R F G S L V L G A R P D D L A D V A W T G G A E R T A R V P F A
UniRef90_UPI00037249D0	G S V I Y I D N Y G N A M T G R R A D S V P P G R A P V L A G R A L P R A
UniRef90_A4AT50	G S V I Y I D N Y G N V V T N I Q R S L F D G R S F E L H A R T S S L I T T V Q
UniRef90_UPI0003B3AA99	H V L A F D R F G N V M L D L E H E E L T K L G D Q I D V N G L R G I Y A
UniRef90_D3DK02	G K I V Y F D R F G N C I T N V P C G A Y T E A E F R G K K V R I V
UniRef90_UPI00047ACF97	G S V I Y I D N Y G N V I T N I R K N L F D D R N Y T L L V R N H K I T T I H
UniRef90_C2M3T6	G T V I Y I D H F G N V V V S N I T R S L L R R F H V Y F R Y Q S V E N I T I C
UniRef90_C8X4B8	V L H   D R F G N T I L G R A E L T A A P Q L R C P A C G D T P V I P A
UniRef90_C9RHA7	I I H   D R F G N I I T N I K K D E I S K Q K N K I R T E K I I K C K F V
UniRef90_A3UBN3	UniRef90_UPI00042A477E G H V I Y I D N Y G N V V V N I S K S I F E G R A F T I H A R S L K I S K I F
UniRef90_UPI00042A477E	G N V I Y I D H F G N V V V N I S Q K Q F S E V G F E I D I K P K I K S I Q
UniRef90_A9B100	G N V I Y I D N Y G N I E T N I L S S N H E H L D L V E I N G T K E V V R V Y
UniRef90_UPI00041EA135	G S V I Y I D N Y G N I V T N I E Q S D F K G K K F Q L L V R N K V I K Q H F A
UniRef90_K8E1Z7	K Y G N V V M D I K P K A L L D A G F E A G D D T T L T M P F C
UniRef90_V2Z426	K Y G N L T I S V K Q D D V K N A K I E V A G D K Q I T A P F G
UniRef90_D7N7G8	UniRef90_UPI00047CFF59 H V L A F D R F G N V M L D L E H E E L A G V G L R I G E A V E I R G V Y A
UniRef90_W0JH94	G E I I L W I D K F G N I I T N I K S E T D N F E L V L N N N K V I N K K A
UniRef90_UPI00040ED42E	E V L G A D T Y G N V Q L A T E L G A D P G A V V H V G D R S L E A V V G
UniRef90_G2Z4L9	G Y V I Y I D H F G N V V V N I T R K M F E E L N E K Y K N Q R K N N I K I H
UniRef90_T0XWU7	G S V V H V D V F G N L I T D L P P G A L P G P G V R V G G S G A R V L P R V

50                    60                    70                    80

UniRef90_X1CL25	K F Y G E G C P D E I I C V K G S S G Y Y E	I A C N K G S T C D F I L G	
UniRef90_E4TM84	M H Y H E S Q G G E A F A I F N D Q G V L E	I G I L K Q G N A A E L L G M E Y N S	
UniRef90_T1BU81	T T F G E A V Y G T P W Y V N S L G L V E	I A C N Q K S A S D A L D I H V A D	
UniRef90_H6RF01	G T Y T D G T P G E P V A M F N A A M G L L E	I A I C M G G A T D L L G L K Y D D	
UniRef90_V5QF93	Q N Y T Q A S G L L A V I G S S G R L E	I A L Q G G S A A G L L S V R P G D	
UniRef90_UPI0003820FA4	R T F A D L P L G E A V L Y T D S A G L L A	I V A V N G G S A A A A L G L D A	
UniRef90_C8PMN2	D T Y S D V N R G D Y L I R I S H G F T A	I A M S Y D N C S G K T G A V E G T	
UniRef90_C7P6C6	K S Y Y E E K D E F I C L I N S E G F L E	I S K F M D N A S K L L D V D Y L D	
UniRef90_UPI000468DF8D	P S S Y S A I A E G E K L A L F N E A G Y L E	I A I F R G S A N S L L G L N Y R D	
UniRef90_XOTF58	R S Y G F I V K K R E M I A T I G S S N F F E	I G I N Q G S A A K K L S V K E G D	
UniRef90_K1ZI5W	N T F S E V G S G E L I C Y V G S N Q T L E	I A V N L G G S A K D V L S A V V G E	
UniRef90_F8C5P0	K S Y G Y A K K G E L I A L F G S E G L L E	I A I R E G S A F K V L	
UniRef90_S7TTC2	H A Y G A P D A K R C L A L I G S R G Y L E	I A V S G G N A H Q C L D V G I G D	
UniRef90_T2KIQ0	N K Y S E V A E G K G L V V F N S S N F L E	I A I Y K S N A S T L M G L K L M D	
UniRef90_X1R5K2	R F Y G E G K M G K I I A V K G S C G F Y E	I I A S N K R N V K R I S G A K I G M	
UniRef90_I3CD76	S H Y A E E Q D S G L L A I N S D G M L E	I L S V Y C Q S A Q Q C N L Q V G N	
UniRef90_UPI0003B56678	N T Y A E A R E G I P F V L E S S T G H M E L	I A L A V K N G N A A R T L L G L E R L D	
UniRef90_UPI0003B5E74A	D T Y H S P T S S Y K A L I N S S S G Y L E	I E F A Y F K K S F A D E F G I G Y L D	
UniRef90_V4J6E0	G S Y Q D L A G V E A G A L I N S S S G E L E	I C A P R E S A A H R L S S A A A G G D	
UniRef90_A3J0F1	K S Y S D F P E G D F I A L F N E E N G Y L E	I I A I Y K G S A S T L L G L H F R D	
UniRef90_M2Y5I0	D T F G T V P P G R V N L V Y T D S A G R L A	I A V N G G S A S A V L L G L G P A Q	
UniRef90_F4AY73	N Q Y S D A E E G K K L A L F N S G G Y V E	I L A I Y K G S A A S L F G L N Y R D	
UniRef90_J2JGW6	P N Y S A I A E G E K L A I F N E A G F L E	I I A N V G S A N S L L G L N Y R D	
UniRef90_I0IPM1	R F Y Q D V P V G N L G I L I N S S S G W L E	I F Q R E G S A Q K L W N L Q K G D	
UniRef90_UPI000363D60B	N R Y S D L P G P D L L A L F N S S S D Y L E	I L A I Y K G G A S T L L G L D Y R D	
UniRef90_UPI00036CF146	R T F A D A P A G E A V V L I D S A G R V A I	I A V N G G S A A E L L A A R T G A	
UniRef90_K4IEA7	K N Y S D I P E G K K L A L F N S S S A F L E	I L A I Y K G S A A S L L F G L K Y L D	
UniRef90_G2EGW1	N K Y S D S P V P E G R G M V I F N S S A G Y I	I I A V Y K G S A S S L L G L G L M D	
UniRef90_UPI0003B43DA1	R T F S D V N L G E G F H Y R N S I G L C E I	I A V N C G R A D Q F D A V I G T	
UniRef90_D1CEX8	R T F G E V N R G D L L I Y E D S S S R F I C	I C G Q N L G H A G N T L G I G P G D	
UniRef90_X0W3F3	S T F S D V A L G E P V A V I G S S G L L E	I I A V N Q	
UniRef90_Q1IKS0	S N Y A E G A K G E A F A I L G S G G F I E	I I S V N R G S A A Q A A Q A N K G S	
UniRef90_C6BU25	C C Y A E L E T G A T G L L A G S Q G Y Y E	I I A L N R G A A S E M L G L E P G D	
UniRef90_S7XDN3	N K Y S D I I E G K G L L V V F N S S S G Y I	I I A V Y K G S A S T L L M G L K T M D	
UniRef90_A0A023BVM3	N R Y S D A E D G K K L A V F N S S S G Y L E	I I A I Y K S N A S S L L F G L Y Y R D	
UniRef90_UPI000365E883	N K Y S D I I D E G R K L L V V F N S G D F L E	I I A V Y K G S A S T L L G L G L M D	
UniRef90_D6SDQ6	A Y Y Y A A I P E G C L G L V T G S Q G K L E	I I A A R E Y S A A R L L L G L A P G D	
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 G E I I Y F D K F G N A I T N V P C G K Y A Y A E F R E D K L K V V  
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 G Q I T A I D N H A N V V T D I K P A A F T A L G W K L K D G Q K I D C R Y V  
 G E V L Y A D S □ G N L V T N L T K G D □ A D H A I S I S I D E R D V G S L A  
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 A  
 E I I H K D V F G N V V L S S K G K I L S □ M G L K K S D N K K Y □ F K N V  
 R V P Y R  
 G C V V Y I D H F G N C I T N I T K R Q V K E V D F E □ T F S T K S I K A V K S  
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 V D H F G N I L L D Y Y A L L P E K V D M S H A G T A I P Y V V  
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S S F A A V S	T G A V G L V	D A N G M L S	V V M N Q R S A A A D	L G V D V G D	
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E S Y H S V S	S S G S V M A F	F N S Q N L L	E I A V S D S R S A	N T L L G I   E V Q N	
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UniRef90_E0SR99	E V F S V Y P E G T L V L Y E N S F W L A E L A V N K G S A K H H L C A E P G D	E I F K I G D D	D		
UniRef90_U2S4V1	T N Y S D V D T G A L V L R D S E G V L I I A I N M G D F A T S N G L A A	E I F K I G D D	D		
UniRef90_R5D7H9	P T Y S Y V D S G K P A L I V E K T G Y V S M A I M G N F A E T Y E L A	E I F K I G D D	D		
UniRef90_X0Z4N5	M N Y S S V K K G D L L F L I G S L G L V E I S V R E G S A F E R L S L K P G E	E I F K I G D D	D		
UniRef90_A4YCN0	R T F Q E G G S D L I I Y R N G Y G F L E L G L N K A D A S V V L N V K E G D	E I F K I G D D	D		
UniRef90_A8V090	N S F L E G D E G K L Y L I K G S F G Y Y E L S T P L S S A K D M F N L K K G D	E I F K I G D D	D		
UniRef90_R5BFG1	R S F G Y V F E F G K S V L F N G S S G Y M G M G L N Q K S F S A A A Y	E I F K I G D D	D		
UniRef90_M0KV87	D A V S A V P E R T L A I V P G S A G Y Q E L F L R G G S A A A A F G P E P G D	E I F K I G D D	D		
UniRef90_B2V5L4	R N F L E G E K G K P N L I K G S F G F Y E L F L P M D S F K V K F N A R L F E	E I F K I G D D	D		
UniRef90_R5AE35	R S F G Y V G V G E P I R 5 L N G S T S Y I A L S L N Q R S F S A K Y	E I F K I G D D	D		
UniRef90_A0A011A2K8	S S Y S D V D S K K V V I V A S A S E D I L A L N L G S F A D T Y G T A V N D	E I F K I G D D	D		
UniRef90_C5EQ39	R S F G Y V P V G S N L I F N D L A S F V T I G C N Q G Y F A R R Y G L D	E I F K I G D D	D		

UniRef90\_K1MW93 H | N | I |  
 UniRef90\_A0A011NEK3 P | V |  
 UniRef90\_H0E9W0 D | L | R | I | R  
 UniRef90\_G2LG31 E | V | Q |  
 UniRef90\_M5A6V1 Q | V | T | L | T | P  
 UniRef90\_I3ZXJ9 Q | I | Y | I | S  
 UniRef90\_A4C223 T | V | T | I |  
 UniRef90\_G8QZF0 V | I | T | I |  
 UniRef90\_I3C108 T | I | T | V | N  
 UniRef90\_UP100047BE7F0 P | V | I | V |  
 UniRef90\_A2U4D3 P | I | I | I |  
 UniRef90\_K0N78 K |  
 UniRef90\_D6TM62 R | L | Q | L |  
 UniRef90\_UP1000404F741 S | I | T | I |  
 UniRef90\_UP100037E87D4 R | V | V | V | A | P  
 UniRef90\_F0REKO T | I | T | I | N  
 UniRef90\_UP1000248EC1E T | I | N | I | T  
 UniRef90\_UP10003F8ACBC G | I | T | V |  
 UniRef90\_UP10003669F59 T | I | T | I |  
 UniRef90\_A8L1E5 R | V | I | I | T | P  
 UniRef90\_M2NHH2 D | Y | Q | V |  
 UniRef90\_T2J4Q8 D | I | T | V |  
 UniRef90\_O67940 K | I | K |  
 UniRef90\_F4FCQ0 L | L | R | I | R  
 UniRef90\_G1Y2K0 P | I | G | V | R  
 UniRef90\_UP100037486A0 K | V | V | L |  
 UniRef90\_A3ZPT6 R | I | T | I |  
 UniRef90\_UP10003712A12 K | I | N | I | R  
 UniRef90\_F8B6D2 L | L | Q | L | S  
 UniRef90\_I0A191 K | V | C | L |  
 UniRef90\_D9PKB5 P | V | R | L |  
 UniRef90\_UP100037EEBB9 V | V | S | V |  
 UniRef90\_E1QH12  
 UniRef90\_U2C7X5 T | I | S | I |  
 UniRef90\_L1P3W5 R | V | S | I | T |  
 UniRef90\_UP1000303946F G | W | T | I | T |  
 UniRef90\_C6HXN4  
 UniRef90\_W2US51 T | V | S | I |  
 UniRef90\_Q26CX4 P | I | N | I |  
 UniRef90\_UP1000255B1B5 I | I | T | I | N  
 UniRef90\_U4QVJ2 R | I | P | V | R  
 UniRef90\_L7WG07 P | V | I | I | T |  
 UniRef90\_F0ICD6 P | M | S | V |  
 UniRef90\_F9YT27 Q | V | T | I |  
 UniRef90\_UP1000370CD0C T | I | T | I |  
 UniRef90\_UP1000314EA51 E | Y | K | I | S  
 UniRef90\_R6TKL1  
 UniRef90\_UP100041DD536 T | V | E | I |  
 UniRef90\_M1RUX9  
 UniRef90\_E4TB35 K | V | Y | V |  
 UniRef90\_UP10003709630 N | V | T | I |  
 UniRef90\_C7M7D8 R | V | S | V |  
 UniRef90\_UP100037E8716 K | I | D | I |  
 UniRef90\_R9CNF6 R | I | F | V |  
 UniRef90\_U1GVK3 P | V | A | V | A  
 UniRef90\_R5AQN7  
 UniRef90\_F4G3B8 D | V | C | I |  
 UniRef90\_E2N549 R | V | I | V |  
 UniRef90\_R5AL05 S | W | K | I | T |  
 UniRef90\_R5B3L7  
 UniRef90\_E0Y0R7 W | V | R | M |  
 UniRef90\_W8VRJ4 P | V | I | I | N |  
 UniRef90\_B1L7J4 E | I | S | L |  
 UniRef90\_UP10003826D6D K | I | Y | I |  
 UniRef90\_UP10003B5DD93 T | V | E | I |  
 UniRef90\_UP100047BBFB6 D | V | D | V |  
 UniRef90\_C1DXI2 E | I | L | I |  
 UniRef90\_UP10004654ACD R | V |  
 UniRef90\_C0QQK1 R | I | L | I |  
 UniRef90\_W0DBG5 R | V | V |  
 UniRef90\_N6VX80 E | V | I | V |  
 UniRef90\_S2W545 P | V | S | I |  
 UniRef90\_Q2JBQ7 R | L | T | L | R |  
 UniRef90\_E4N7D4 R | V |  
 UniRef90\_F3Y594 R | V | S | V |  
 UniRef90\_B5JIY8 T | L | Q | L | S |  
 UniRef90\_R5BBF3 E | W | T | M | R |  
 UniRef90\_F0NYQ7 N | I | L | I |  
 UniRef90\_N2A2E0  
 UniRef90\_G8QRY8 P | V | S | I |  
 UniRef90\_E0SR99 T | V | L | I |  
 UniRef90\_U2S4V1  
 UniRef90\_R5D7H9  
 UniRef90\_X0Z4N5  
 UniRef90\_A4YCN0 D | V | C | L |  
 UniRef90\_A8V090 K | V | I | I |  
 UniRef90\_R5BFG1  
 UniRef90\_M0KV87 E | L | T | V | R | P |  
 UniRef90\_B2V5L4 E | F | E | I |  
 UniRef90\_R5AE35  
 UniRef90\_A0A011A2K8 D | V | T | I | T |  
 UniRef90\_C5EQ39

The figure displays a sequence alignment of UniRef90 entries, showing conservation across various positions. The alignment is presented as a grid where each row represents a UniRef90 entry and each column represents a position in the sequence. A color scale indicates conservation: black (highly conserved), white (conservation not shown), blue (conservation shown), red (conservation shown with a different color), yellow (conservation shown with a different color), and green (conservation shown with a different color).

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf  
sol25  
sol5  
sol0  
jhmm  
jpssm

	50	60	70	80
UniRef90_C6X4D0	K I Y N Q Y T E G K S A A I F N D A G L L E L T I Y K G N A K T L F G L K V G E			
UniRef90_C2HHF3	C T Y E E G A K K G Y F L L I G S N K T F E I S I V N G N A Q Y L N V H I G D			
UniRef90_R4Z771	R R V D A G R G L W W T D S M G M V A V A V A D R A S A A E D L G V L P G D			
UniRef90_X1LG94	R T Y A E G E E L L A L I G S G G Y L E I A V K G G N A S A I L D A E V G N			
UniRef90_X1EEC6	T N Y E S A K E G E L F L I E G S S N T L L E E I S L K N G N A N K Q L G V K T G E			
UniRef90_E1JYAY7	R T Y N D I A P G A V G I L A G S Q G Y L E I L A M A G A S A A R L E L R G G D			
UniRef90_Q0RH82	V T F G S V A P G E L V L Y V D A A G M G A I A V R D G D A A R T L A V A P A D			
UniRef90_F0S083	E K F S G F Q K G E L F V S V N P E G H F Q I V A Y M A S A A N I L K A K R G M			
UniRef90_M0M4I6	A I F E A D E G S L V L A P G S S G Y L E V V H R G G S A A E T F G P S P G D			
UniRef90_G6ELR0	K S F F A D V R I G Q P I N F N N			
UniRef90_I4AL31	D Y F L Q G N D R L P N L I N G S F G R V E I F V P E K N A E K H L R L R K G D			
UniRef90_J3CF85	S S H T E V V S G Q S A A I F N D S Q L L E L T I Y K G S A K T L F G L N V G E			
UniRef90_UP10004256B65	R D F G E V A Q G E L L L H I K K D A A E L A I N M D D F A S T Y			
UniRef90_R5Y2R1	K S F G Y V Y V E K G E D V I F N D L A S Y V T I A A N E A Y F L K K Y K L D P E K			
UniRef90_Q5V5H1	D A V S N V P E G S L A I V P G S A G Y Q E L F L R G G S A A S T F G T G P G D			
UniRef90_UP1000370701A	K S F G Y V Y V G L G E D V L F N D L A S F V T I G S N Q A D F R Q K Y G L D T D S			
UniRef90_K1HTT6	E Y Y A D F N V G E L L A L F N E V G Q L V V A I P G G S I R T L L G V H L E D			
UniRef90_S3MAV9	K R Y E V D K G K Q L V R T E A D G K I I A F C I N Y G N L A Q E S G L G V G D			
UniRef90_A3ZPT7	P A D H Q Q P E M T Y V A V M G G S G F E L C I V G E S A A F L G I R P G A			
UniRef90_W0FWR7	S N Y S D V D Q G S M I C R V T N D E M I L I A I N M G D L A T T S G L A T			
UniRef90_A8UQR2	P F F Q A G E R E R L L N L V C G S F G F M E L F I P M G N A R E			
UniRef90_X0U4H3	P N Y N T A K E N E L L F L I E G S C K T L E I S L K N G N A N D K L H L K T G T			
UniRef90_UP10003B30FDD	L N F R G K K G K G E F F I S V N P E G H Y Q L I S Y M A S A A R L L K A T R G T			
UniRef90_S5DPV0	D N Y F R K N E T I G A I V V D S W G M F			
UniRef90_L7FJS4	K T Y E E G A K H N I L L E G S N N T L E V S K V N G S A A R L L S V T I G E			
UniRef90_U1FLL7	Y T F F S D V D K G A F L V R T N H A G F I I A A C I N Y G K L N E A A K V D I G S			
UniRef90_R9MPP0	T R M M E R R N D G E L L I I Y P G S S G Y T E I G T V R G N F A K D F D V K N G D			
UniRef90_X1V8Q0	R T Y A E G K G I I A L L G G S S G Y L E I S L K N G N A N D K L H L K T G T			

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf  
sol25  
sol5  
sol0  
jhmm  
ipssm

UniRef90_C6X4D0	S   Y   I
UniRef90_K2HHF3	Q   K   L
UniRef90_R4Z771	E   V   S   V   S
UniRef90_X1LG94	E   I   R   V   R
UniRef90_X1EEC6	K   I   K   I
UniRef90_E1JYA7	P   V   I   L
UniRef90_Q0RH82	R   L   A   L   R
UniRef90_F0S083	K   V   K   V
UniRef90_M0M416	S   I   E   L   R
UniRef90_G6ELR0	
UniRef90_I4AL31	E   V   I   L
UniRef90_J3CF85	N   I   Y   I
UniRef90_UP10004256B65	
UniRef90_R5Y2R1	T   Y   Q   V   R
UniRef90_Q5V5H1	A   L   S   I   R
UniRef90_UP1000370701A	E   Y   T   V
UniRef90_K1HTT6	Q   L   F   I
UniRef90_S3MAV9	K   F   V   L
UniRef90_A3ZPT7	K   V   E   I   S
UniRef90_W0FRB7	
UniRef90_A8UQR2	
UniRef90_X0U4H3	T   I   K   I   S
UniRef90_UP10003B30FDD	K   V   V   V
UniRef90_S5DPV0	
UniRef90_L7FJS4	T   L   K   L
UniRef90_U1FLL7	A   L   T   V   S
UniRef90_R9MPP0	I   I   E   I
UniRef90_X1V8Q0	E   V   K   L

lupas\_21  
 lupas\_14  
 lupas\_28  
 jnet  
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 jhmm  
 jpssm

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 B B B  
